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FLOWER,

FRUIT AND KITCHEN

GARDEN:

CONTAINING FULL DIRECTIONS FOR THE HOTHOUSE, THE GREENHOUSE, AND EVERY BRANCH OF
FRUIT, FLOWER AND VEGETABLE CULTURE.

BY PRACTICAL GARDENERS, FLORISTS &c.

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JANUARY.

CALENDER OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

THE FLOWER GARDEN.

FIRST WEEK.

Auriculas.—At this season of the year the seed sowing should not be neglected. Prepare the different ingredients for top dressing the old plants in February, and turn over your heaps of compost; if not under cover, provide some temporary frame work for the purpose, such as a hoop or two, fastened to a pantile lath passing along the top to strengthen them, so that a mat or other material may be occasionally thrown over the compost to preserve it from excess of wet; small quantities lose much of their strength by being exposed to winter rains and heavy falls of snow.

Carnations and Picotees.—Give plenty of air, and protect them from heavy rains.

Dahlias.—Those not in the ground should be examined every now and then; look to the crowns, and see that the stems are not decomposing, and the moisture rising over the eyes; if so, make use of a little dry earth, or sand, to absorb the moisture, and remove it as soon as it becomes wet, replacing it as often as possible.—J. T. N.

Auriculas.—The auriculas at this season are to be prepared for flowering well by fresh earthing. They must also be preserved from frost, and defended against great rains during the remainder of the severe season. Take the opportunity of the first mild weather to dress the plants, and let it be done with great care, remembering that the bud of the flower is already formed in the centre, and that if it be rudely disturbed, it will do more harm than all the good that can be derived from the dressing. On the supposition that you are in possession of the necessary compost, stir the earth on the surface of the pots. Take it off as deep as you can, without hurting the roots. In the place of this put in some of the compost, and draw it up about the plants. A great deal of care must be taken that none of it gets amongst the leaves, and then the higher it is drawn up about them the better. The plants, in good weather, must not be kept without water. If the weather be mild and open when they are dressed, a gentle watering should be given them, giving it carefully to each plant three hours after sunrise, and using a pot with fine holes; do not use spring water, but water from a pond, or tanks in which rain water is kept. In this way the course of nature will be kept on in the proper gradual method, neither forced nor retarded. The shoot for bloom will rise as the season calls it forward, and the plants show the best flowers of their several kinds.—S. D.

Auriculas.—Let them have as much air as possible on fine days, but be careful to cover them well up when there is any frost. The roots should be kept moderately damp at all times, excepting those days when the frost is very severe, then they should be kept almost dry. They should be thoroughly watered in the morning, and have plenty of ventilation all day, after such watering. —Ed.

Ranunculuses.—Take the advantage of a fine day, and plant ranunculuses. When those put in the preceding autumn are decayed and gone, these will come in season and continue to the time of the summer flowers. Dig up the bed where the roots are to be planted, and spread over it a mixture of one part coal ashes, and two parts sand. Let this be trodden in, and then dig the whole ground over again, and let the quantity of sand and ashes be as much as would cover the ground an inch and a half deep. The bed must be made as for the autumn plantation, but the roots must be planted half an inch deeper. Some hoops must be placed over it at a due distance, by which it can be covered as occasion requires, and all that remains to be done is to shelter it from excessive rains and defend it from severe frost.

Chrysanthemums are now out of bloom, and the stalks should be cut down. Should there be any particular choice sorts, the stalks may be cut in short lengths, and be struck in heat. Always cut the lower end of the cutting close under the joint. The will require a free supply of air, and a proportionate quantity of water.

ROSES may now be thinned out a little in the centre, and the strong and middling shoots should be more or less shortened in order to cause them to push shoots and flowers more freely. They, however, should not be trimmed up in a formal manner, for the more natural the outline of the plant, the better; most shrubs require nothing more than to be pruned of injured shoots, on which their future health depends.

CUTTING DECIDUOUS HEDGES.—Deciduous hedges may now be clipped, plashed, or be cut down, according as it may require. This is a business generally performed in severe frosts, or when there is snow on the ground, so as to prevent other operations from going forward, and is very proper employment at such times.

SOWING TENDER ANNUALS.—At this time prepare a hotbed on which to sow all kinds of tender annuals, either in pots, pans, or boxes. Light vegetable mould is the best soil, and burying the seeds according to their respective sizes, or to about the depth of the diameter of the seed. As the plants appear, admit air daily, and also water regularly, but not to excess, as the steam generated in the frame will be nearly sufficient for them. Seeds sown in the hot-houses or flower forcing house will require greater quantities, as the atmosphere of such structures is in general much drier than that of pits or frames heated by fermentable matter. When the plants are sufficiently strong they should be planted out, either into small pots, individually, or thinly in larger pots, and the sooner this is done the better, for if annuals be drawn up weakly, and crowded at their first offset, they will rarely recover, and seldom make strong flowering plants.

HALF-HARDY ANNUALS are such as require to be reared in a slight hotbed, towards forwarding them for their final transplantation in the open borders of the flower garden. They may be sown every way as directed for tender annuals, but are always sown in greater quantity. When the seeds vegetate, air should be freely admitted, and during fine days the glass may be entirely removed from them, taking care to cover them up at night. If the plants come up too thickly, they should be thinned out, so that they may not be injurious to each other.

PLANTING HERBACEOUS PLANTS.—Herbaceous plants of all sorts may be planted, if the weather be mild. Borders or collections of these plants may also be re-modelled, by taking them up, and reducing the more luxuriant, and re-planting the whole, making up what deficiencies may have occurred, and adding such new ones as may be desirable. In planting such, a judgment is necessary to dispose of the whole, so as to produce an agreeable effect when in flower, and an uninterrupted succession of flowers during the season. The beauty of a border of gay flowers does not consist so much in the quantity of bloom, as in the manner in which that bloom is disposed, so that harmony of colouring may prevail throughout the whole. Gardeners sadly err by aiming at extensive collections. To produce a gay flower garden, an abundance of colouring, and that well arranged, should be the principal object; and this can be attained by comparatively few species, so that attention be paid to the number and disposal of each.

SOWING SEEDS OF AURICULAS AND POLYANTHUSES.—Auricula and polyanthus seeds may now be sown in a warm, sheltered spot, or more properly at this season of the year in shallow boxes, or pots filled with light rich mould. The latter are much to be preferred, as being more readily removed from one situation to another, as occasion may require. The surface should be made perfectly smooth and level, on which the seeds should be sown tolerably thickly, and covered about a quarter of an inch with very light, finely-sifted mould. Previously to filling the boxes or pots, it is important that they be well drained at bottom, to allow of all superfluous moisture passing freely off. When sown, they should be placed in a situation perfectly sheltered from the cold winds, but entirely open to the morning and mid-day sun. In this situation they may remain till the beginning of May, when it will be necessary to remove them to some more shaded place. There is not any plant that attracts the florist's attention that requires more shade than the polyanthus.

FLOWER-GARDEN BORDERS.—Let the flower garden or beds be now thoroughly cleared of all weeds, and every kind of litter, for neatness in this department is expected, and always agreeable, and at no season more so than the present, when the flowers and plants, the crocus, the snowdrop, &c., will be beginning to appear. The surface of the borders should be neatly and carefully stirred with a hoe, and neatly raked, which will give levelness to the surface, and make the whole appear pleasing to the eye.

SECOND WEEK.

AURICULAS.—Attention must be given to the seed pans, to see that the soil be kept moist, or the wind may disperse the seed. "Protect them from heavy rains, but let them have snow, if any, and all before the seeds are up. Keep the pans in a western, or north-western aspect, till February; cover with a sheet of glass, or a handglass. The old plants should have all the air it is possible to give, so that they be protected from excess of rain, which will prove injurious to them at this season of the year if allowed."

Dahlias.—The dry roots must not be neglected; look over them now and then; withdraw the diseased, if any, and cut out the decayed parts. If any of the scarce varieties are liable to be lost from decay, make up a little heat, and set them to work as soon as possible.

Pinks.—Look over the beds and see if any of the plants want fastening; the worms in mild weather loosen their roots, and some may require your attention; also replace decayed number sticks.

Tulips.—If the weather prove very mild, tulips in some places will make their way through the soil; the tips of them should be covered, to secure them from injury by sudden frost; the surface of the bed should be slightly broken, if it has become closed by heavy rains.—J. T. N.

Treatment of Half-hardy annuals.—These require to be raised on a hot-bed, and as soon as the seedling plants are an inch or an inch and a half high, commence transplanting them about two inches apart, each sort by itself, beginning at the end of the frame previously unoccupied by them; remove the old soil as it becomes cleared of plants, and replace it by new, so that at the end, the whole are planted in new soil; give a gentle sprinkling of water through a fine rose, and finally put on the lights. If the heat of the bed is much declined put a little lining on the back part of it; when they begin to grow, give plenty of air, and occasionally water as they require it; there they may be allowed to remain until the spring frosts are over, exposing them gradually until they be inured to the open air, then take them up with good balls, and plant them in their proper situations in the flower borders.

Sowing Hardy Annuals.—About the middle or latter end of this month, if the weather be mild, and the ground dry, and of a light sandy nature, hardy annuals of all sorts may be sown, either in beds to be again transplanted in the borders where they are to flower, or in patches moderately thin, and not deeply covered. The smaller growing annuals do not succeed so well by being transplanted as those of stronger growth; therefore, the former should always be sown in patches, beds, or groups, where they are to remain to flower. The method of sowing hardy annuals is as follows: Stir up the soil, and make it fine with the hand if it be light, if not, with a small hand hoe, or fork, then with the finger draw a circular drill of about six inches in diameter in the circle, and one inch or less deep, according to the size and habit of the plant intended to be sown. Cover the seed lightly with moist soil, and place an inverted flower pot over them, if convenient to do so; allow the pot to remain until the seed have begun to grow, then prop it on one side two or three inches high, until the plants are able to bear the weather, afterwards remove it altogether. Covering the seeds with a pot, answers several good purposes. 1st. It keeps the soil moist until the seeds have vegetated. 2nd. The sun shining on the pot, causes a reflection of considerable heat, and brings up the seeds much sooner than under other circumstances. 3rd. It screens them from the spring frosts. 4th. It prevents the soil being washed off the seeds, or the seeds themselves being washed away by heavy rains: and, 5th. It preserves them from birds or mice. When the plants are about an inch high, they must be thinned out according to the kind, that those remaining may be able to grow and flower strong; the height that the plants grow, must also guide the person as to what part of the border they ought to occupy, which must be left to the judgment and discretion of the grower. If sown successively through the summer, there will be a constant supply of flowers till the autumnal frosts kill them; in mild winters, they may be kept till towards Christmas. Staking, tying, and occasionally stirring the soil, and in dry summers gently watering in an evening, is then all that is necessary.

Auriculas in Pots.—The choice auriculas in pots should be gone over, all decayed leaves removed, and the surface of the pots gently loosened up, and a little fresh mould applied all over the surface and round the stems; this will support them, and enable them to bring their flowers to greater perfection. Those which require it should be shifted into larger pots, in a careful manner. All suckers should be removed from the stems, and potted or otherwise disposed of. Water should be now given to them in moderate and regular supplies, and plenty of air admitted to them, if in frames during the day, but care must be taken to preserve them from exposure to frosts during the night, in order to prevent the opening blossom from being nipped or injured.

TULIPS, HYACINTHS, AND OTHER BULBS IN BEDS.—These should be protected from severe frosts and rain, by being covered with canvas or mats, or still better, with patent tarred paper, which is much cheaper, lasts longer, and more effectually throws off the rain. These should be supported upon hoops arched over them, for as the flower buds will now be showing themselves, they are in that state more liable to be destroyed. It is, however, unnecessary to protect the less valuable sorts, otherwise than by spreading a little dry litter over them in severe weather.

TRANSPLANT CARNATION PLANTS.—Transplant carnation plants in mild weather, which were raised last year from layers, into large pots, borders, &c., about the latter end of the month, if they be in tolerable strength. Those intended for pots should be of the choicest varieties, and if the plants have been wintered in small pots, or in beds, if it be settled mild weather, they may be transplanted into proper sized pots, to remain for flowering.

COCKSCOMBS may be grown with strong, short stems with very large heads, if they be allowed to remain in small pots until the flowers be formed, then potted in larger pots, and supplied with as much liquid manure and moist heat as possible. Sow the seeds in pots filled with a compost of three quarters of leaf mould, and one quarter of sand, and place them in the frame; when they are up, and have become large enough to transplant, put them singly into sixty sized pots, adding to the above compost a good portion of rich loam; subject them to a very close humid heat, and by no means allow them to stand further off the glass than one foot and a half, and occasionally syringe them over the head with clear water. When the roots begin to show themselves through the bottom of the pot, shift them into forty-eights, and let them stand in these until they show flower; then select some of the best shaped and pot them in thirty-twos, in a compost of one half of rich loam, one fourth of leaf mould, and one quarter of sand, mixed and broken together, but not sifted. When the roots have grown considerably, shift into twenty-fours, the size they are to flower in, give them a very strong moist heat, and plentifully supply them from the time they show flower with water in which sheep, fowls' or pigeons' dung is dissolved.

MIGNONETTE, AND TEN WEEKS' STOCK.—The ten weeks' stock is a pretty annual, and none make a more agreeable appearance in the borders and in pots, &c. It continues a long time in bloom, and the mignonette imparts a sweet odour, and is often sown in window sill boxes, where required. It is now time to sow a little of the seed of each, in order to raise a few plants to blow early in summer. When the plants have been up a month or six weeks, they should be transplanted where they are to remain. They must not be over-watered, and kept free from frost.

CARE OF CARNATION PLANTS.—Few plants in the open ground at this time require more care than the carnation plant. Nothing is more likely to injure them than cold rains; if these be suffered to fall heavily upon them, they will give the frost more power. They must be sheltered at such times, but left open in mild weather. To choke the plants from want of air would destroy them almost as effectually as the worst of weather. Chaffinches, sparrows, and other small birds feed on their inner leaves, and utterly destroy them; care must be taken to prevent this mischief. A covering of pea straw should be laid upon the choice flower beds in severe weather, but it must be taken off when the weather is mild, for if it be kept constantly on, the plants will suffer from their tenderness, when it is once taken off in the spring. It should be the aim of the gardener to defend his flowers, not to smother them; the great art is to know just how much will answer the purpose of defence; all the rest is injurious.

PREPARING GROUND FOR PLANTING VARIOUS FLOWERS.—In open and tolerably dry weather, let the beds, borders, and such pieces of vacant ground in the flower garden as are intended to be planted with hardy perennial or fibrous rooted flowers next month or in March, be dunged and got ready. The ground may be laid up rough, that it may be so far ameliorated by the weather in the meantime, and this sort of preparation will lessen the labour of the two following months, in which the gardener has enough to do in every department of his business. The shrubbery should now also be dug. Many kinds of shrubs throw up a number of suckers from the root, which should now be displaced, which, if not wanted for filling up occasional vacancies, may otherwise be disposed of as shall be thought proper. Then let the ground be dug over amongst the plants, observing to injure the roots as little as possible in the operation. If the shrubbery be pretty old, and if the roots be much extended and intermixed, the digging had better be done with a three-pronged fork, than with the spade. In old shrubberies, where the plants are quite met, digging is not very practicable nor at all advisable. The hoe and the rake only should be introduced amongst them.

R. H.

THIRD WEEK.

AURICULAS.—If the season continues mild, many of these plants may be showing their trusses, and though they move but little till next month, it will be advisable to keep those in so forward a state from the action of the sun as much as possible; by turning the frame to the south it will considerably reduce the sun's power on them, or, if more convenient, remove them into a frame by themselves, to a western aspect. Look the plants over, and water those you find getting dry, for they may now be supplied with a little moisture. Prepare your compost for top-dressing; protect it from heavy rains, that it may be in a proper condition for the purpose, giving air, &c., as directed last week.

CARNATIONS.—Examine the plants, and give water sparingly to those that need it, for they should be kept moist. Air also is as important; the glasses should not be left on the frames unless the weather be wet, or cold drying, easternly, or northernly winds are blowing. When the weather is of the latter description, give air by lifting the lights a few inches and closing them at night, but when heavy rain or snow is falling, lift the glasses both front and back, that there may be a free circulation of air through the frames.

DAHLIAS.—Still continue to look them over now and then, for if disease attack them, they decompose rapidly. If the roots are packed two or three deep, as we have often seen them, be sure to examine those at bottom.—J. T. N.

CARE OF SEEDLING PLANTS.—As the frost may now become more dangerous than ever to seedling plants, particular care should be taken to defend them. The choicest kinds in boxes should now be let into the ground, otherwise the shelter laid upon the surface will not prevent the effect of frosts through their sides. Choose a dry spot, open to the south; dig out a piece of ground capable to receive the boxes a spade deep; strew over the bottom some coal ashes with the cinders amongst them, and set in the boxes, fill up the space about them with dry mould, mixed with some sand, and well beaten in, and upon the surface of the earth, in the boxes, which will then be upon a level with the ground, strew some pea straw. If some of these flower seeds have been sown in warm borders in the open ground, let a good quantity of straw be thrown upon the surface, and let a large parcel of dry mould be thrown into the alleys between the beds, and lie a foot thick round the sides. Procure a good quantity of fresh dung, and throw it into a heap to warm gradually. It must lie about eight days, and will then be fit for the making hotbeds for raising the tender annuals from seeds. This time of heating, with twice well turning, will make it perfectly fit for the purpose.

GREENHOUSE PLANTS.—Greenhouse plants should have fresh air admitted at all favourable opportunities, have occasional watering, and be carefully protected in severe weather. In mild days, when the weather is moderate and calm, let the windows be opened a little for the admission of fresh air about ten or eleven o'clock, and about two or three in the afternoon let them be shut close again. But the time of opening, and the time they should be kept open, must always be determined by the weather. In frosty weather, the windows must be constantly shut, and if very severe, let the window shutters, if any, be shut every night, and even occasionally in the day time, when the frost is extremely vigorous and no sun; or in default of shutters, let garden mats be nailed up against the windows, and remove the more tender plants in front, as far from danger as possible. Keep the plants clear from decayed leaves, and as clear as possible from foulness, and every part of the house free from fallen leaves, &c., all of which is essential at this time for the prosperity of the plants. The temperature must be regulated to suit the nature of the particular plants cultivated; but, in general, the mercury should stand about 45 deg.

AURICULAS.—The auriculas in pots should now be dressed, for the plants will now begin to push for flower, and must be attended to and assisted. Strip off dead leaves; take as much of the top mould off as can be without disturbing or bruising the roots, and fill up with the usual compost, a little pressed down. If the pots be dry from the shelter afforded them, give a little soft water in mild weather, about ten in the morning, and fail not to water daily, as the plants push forward.

PRUNING FLOWERING SHRUBS.—Finish pruning flowering shrubs and evergreens where they want it. In doing this work, observe to cut out all dead wood, and where any of the branches are too long, or grow straggling, let them be cut off close, as you see necessary, and where the branches of different shrubs run into each other, let them be cut shorter, so that every shrub may stand singly and clear, then all the different shrubs will show themselves to the best advantage.

FORCING EARLY FLOWERS.—Where early flowers are required, various sorts may now be planted in frames or hothouses, such as pots of pinks carnations, sweet-williams, anemones, ranunculuses, narcissuses, early dwarf tulips, hyacinths, jonquils, and any other ornamental and sweet smelling flowers, both of the fibrous, bulbous, and tuberous rooted kinds. Much more may be done in the forwarding spring and summer flowering plants than is usually considered necessary; not only tender but hardy annuals, and many kinds of hardy perennials, may by being sown or placed in a little heat at this season, be got ready to start into bloom as soon as the frosts are over, and thereby add to the early beauty of the flower garden, and lengthen the period of the flowering season of the plants so treated. A good lot of greenhouse cuttings should now be put in to raise plants for the borders in summer.

Anemones and Ranunculuses. — Anemones and ranunculuses may now be planted, should they not have been planted in October. In dry or properly prepared soils and in good situations, the latter end of autumn is the best season in which to plant these roots; but in heavy soils or cold situations, the latter end of this month or in February is a very fit time to plant them. They like a rich loamy earth. In light soils they often languish in spring and early summer droughts, and do not show their flowers fully. To garden earth, therefore, of a middling texture, should be added some strong clayey or loamy soil, and it should be well corrected with the cooler dungs, that is, of oxen or hogs. The whole should be well mixed and incorporated to the depth of fifteen or eighteen inches. The roots may be planted in four foot beds, with broad alleys, as for the choice tulips. Form the surface level, in order to detain rather than throw off the moisture, and throw up the alleys about two inches deep. Then draw flat drills, exactly two inches in depth, at six inches apart, across the bed. In these place the roots, claws downward, at the distance of four inches from each other, covering carefully, so as not to displace them, and so that they may be buried an inch-and-a-half, as nearly as possible. Finish all with the rake; but the surface of the beds should be quite level and not rounded, as for bulbous flower roots.

Planting various kinds of Shrubs.— In planting and decorating the shrubbery, care should be taken to dispose of various kinds of flowering shrubs and plants, in such order, that the different kinds may be easily seen from the adjacent walks or lawns. They should be planted about four or five feet distant. When any of the more curious kinds of shrubs are to be conveyed to any distance for planting, care should be taken to pack them well; they should be tied in bundles, and their roots well packed round with straw, and every bundle packed up in mats, and when shrubs arrive from nurseries in bundles, they should be soon unpacked and trenched in the ground until they can be planted.

Planting Deciduous Shrubs and Trees. — Planting deciduous shrubs and trees in light soils, should now be continued, should the weather permit, and upon cold wet soils, and bleak situations, the operation should not be performed until the close of the succeeding month. The operation of planting will be facilitated if the necessary arrangements of preparing the ground by trenching, &c., be completed before planting commences. The pits, also, when there is no danger of water collecting in them, should be dug, so that when the trees are brought on the ground, no delay may be occasioned.

Care of Grass Lawns and Walks.— Grass lawns and walks should be kept extremely clean, now the season for mowing begins to approach; pole and roll them every week in dry open weather; a wooden roller is best to roll with immediately after poling, in order to take up the scattered worm casts, and when the grass is thus clean, and the surface dry, it should be rolled occasionally with a heavy roller to make the bottom firm and smooth. Grass turf may be laid any time this month, in mild open weather, observing to beat it well, and roll it with a heavy roller now and then to make the surface firm and even. Keep the gravel walks free from weeds, moss, and litter of any sort, and let them be well rolled occasionally in dry weather.

FOURTH WEEK.

Pinks.—These plants are liable to receive much injury from cutting winds at this season. In fact, the most delicate varieties are often reduced to the appearance of dried grass, with only a small speck of green to be seen in the centre of the hearts, hardly sufficient to denote life, and in many cases are entirely destroyed. From the present time to the end of March, a little protection may be afforded them with advantage. The following mode will be found both easy to accomplish and effectual. Procure some old boarding of nine or twelve inches in width, and place them on edge, lengthwise, along the east or north side of the bed (as may be); first drive some pegs into the earth at proper distances, and place the boards between them. To keep them firm, use a wedge. The same sort of treatment will be found equally beneficial to the out beds of carnations and picotees, and also to the tulips where the spear is showing above ground; but as tulip beds are wider than those generally provided for pinks, a greater depth of boarding might be used. By this simple contrivance the plants are considerably protected from the cold winds, and it requires no further attention when once erected, till the time arrives for its removal.

Auriculas.—Nothing more can be done to these plants than was recommended last week.—J. T. N.

Formation of a Winter Garden.—A very interesting flower garden might be formed in some warm, sheltered situation, in the immediate vicinity of the residence. This garden should be planted with evergreens, which, however sombre in appearance in summer when all around is gay, in winter would give rise to pleasing associations by their verdure and clothing, when other flower gardens are naked and bare. A winter garden is not wholly for its flowery ornaments. The *Daphne mazereum*, both with red and white, flowers; *Laureola collina* and *Neapolitana*, not only flower during winter, but also fill the air with their perfume, as also the fragrant *Chemonanthus*, with its varieties, *grandiflorus* and *luteus*. *Kerria Japonica*, expands its golden flowers, and, as it were to form a pleasing contrast, the scarlet and white flowering *Cydonia*, from the same country, are all in full flowering perfection during the same period. The *Arbutus tenedo*, several species of *Andromeda*, the well known *Laurestinus*, &c., amongst shrubs, all flower during the winter months. Of herbaceous plants that flower at that season, we may merely mention, as amongst the most common, crocus, in endless varieties, snowdrops, winter aconite, hepaticas, primulas, &c., and amongst the less known, that beautiful and hardy little annual, *Nemophylla insignio*, and the arctic *Saxifrage*, which flowers profusely under the snow. A very interesting collection of winter flowering plants might be cultivated with good effect in gardens of the above description.

Planting Ornamental Deciduous Trees and Shrubs.—The season for planting deciduous trees and shrubs extends from the beginning of October to the middle of March. In light, dry soils, that have been previously prepared by trenching, &c., the operations may be gone on with at any time between these two periods, provided the weather be mild and open; the earlier, however, that trees and shrubs are planted in such soils, the better. Much of the success of planting depends on the preparation of the soil, that it be properly drained and trenched. Manure is seldom necessary for lands to be planted for ornament, unless they are very poor indeed, and the object be to get up the plantation rapidly, either for effect or to hide disagreeable objects, when manure may be advantageously used.

Ranunculuses.—This is a good season to sow ranunculuses, which will come into bloom in April. Particular care must be taken to preserve them from damp, and when once the plants appear above ground, every opportunity should be taken of mild, open weather, to give them plenty of air. Protect them from vermin, which are too prone to make the frames their place of abode during the winter.

Dahlias.—The seeds of dahlias should now be sown and placed in a hotbed frame. When the plants are sufficiently strong for transplantation, they are removed into small pots, one in each pot, and kept in a greenhouse or cool frame. At the end of May they are turned out, entire, into a deep rich soil. These flower abundantly by the end of July, and being forwarded as stated, the roots become perfected by the autumn, so as to keep plump through the winter. The method we pursue with old roots is, to place them upon a moderate hotbed, or in a mushroom-house that has a little heat; we just cover the roots with some fine-sifted, rotten, tanner's bark, in this they speedily push roots. We usually do this the latter end of January or beginning of February, which we consider quite early enough, as our plants get two or three feet high by the period for planting in the open border. Some growers push the roots as early as the beginning of January, but in consequence of such being deprived of sufficient air, which could not safely be given at so early a season, they were generally drawn up weakly, and seldom bloomed well.

Auriculas.—The auriculas should now be particularly attended to, all decayed leaves removed, and fresh soil applied to them; the following is an excellent compost for the auricula, and at this season of the year should be ready at hand, wherewith to top-dress the plants:—Two barrowsful of fresh yellow loam, one of old ants' nests, one of rotten horse-dung, one of river sand, mixed well together, and not used until at least two years old; if a little quantity of the dung of sheep and fowls be added to it, the efficacy will still be greater. By the application of this compost, the plants will begin to show their flower buds very fine by the end of February. They must still have all the air that can be given them by day, but closely shut down at night.

Hardy Annuals.—A few of the earliest flowering annuals may be sown in pots, for the purpose of turning out in the borders. The general sowing, however, should not take place until the end of March or beginning of April.

Polyanthus.—Polyanthus seed should now be sown, and the old plants top-dressed with light maiden soil, mixed with a little new horse dung.

Shrubbery and Flower Borders.—When the weather is dry, the shrubbery should be dug over in a neat manner, which will greatly encourage the growth of the shrubs, as well as give the whole a more agreeable appearance, and render it much easier to keep it in neat order during the summer by the hoe and rake. It is seldom necessary to give manure to shrubs; but when the roots of them become so matted and entangled as to render digging amongst them impracticable, it may be necessary to top-dress them with any light mould which is free from weeds. This will greatly encourage their growth, as well as give the borders a neater appearance. In very old shrubberies digging is unnecessary: all that is required is merely to keep them clear of weeds and decayed leaves, by means of the hoe and rake. The flower borders are differently constituted, as they are never allowed, under good management, to become impenetrable to the spade. They require an annual digging; and that must be very carefully performed, for fear of injuring the plants which are underground, or burying those that are small. In order to obviate this in a great measure, each plant should be furnished with a label, upon which its name should be neatly printed or written and numbered, so as to refer to its name on the list. Many, however, object to plants being labelled, as having an appearance not altogether in character with the private flower garden. Where that is the case, stout pegs may be driven into the ground close to each plant, and their tops level with the surface: this will, in a great measure, protect the plants, whilst the cause is kept concealed. Great care should be taken in putting in the spade that the plants be not injured; and for the better effecting this purpose, a neat three-pronged fork might be used, which will perform the necessary operation without endangering the plants.

Pruning.—Lilacs, laburnums, and almonds should be touched very sparingly this month, removing only the thin shoots, such as are not likely to have any bloom upon them. If the bloom-buds appear, it is better to allow the shoots to remain till after they have done blooming.

Early Flowers.—Sweet peas may be sown in cold frames, or in lengths in turves, with grass downwards, on shelves, and placed in the open air with their turves so soon as the weather will permit. By adopting this plan, you will have blooms at least a month earlier than those placed in the open air before the weather is fit for them.

THE FRUIT GARDEN.

FIRST WEEK.

Pruning Plums and Cherries.—This is a proper season to prune and nail plums and cherries, either against walls or espaliers. It has been a general complaint that heart cherries are bad bearers when trained as wall trees, but pruning them as duke cherries will bring them to bear in the same manner, that is, leave a great many for right shoots in summer, and dress them in with some small rods run across under the adjoining branches, in order to keep them close to the wall, and prevent them from being broken by the wind and from looking unsightly, at the same time pinching off their extremities to swell the buds below. Never make use of the knife in summer, if it be possible to avoid it, as the shoots die from the place where they are cut, leaving ugly dead stubs, which will infallibly bring on the canker. These shoots may be cut in the spring to about a couple of eyes. Where the trunks are become hollow, cut out all the loose rotten parts, and examine the roots, cutting off what is rotten, injured, or decayed. When plum trees have become barren and unsightly, they may be renewed and brought into good form and fruitfulness by being cut down. When after this operation they shoot forth in the spring, the shoots should be regulated both as to number and position. If any of the shoots grow too strong, which they are very apt to do, stop such by pinching off their extremities, which will check their unequal luxuriance, and dispose them to produce wood of more moderate growth, and more likely to be sooner fruitful. Much depends on the early management of a tree, in order to direct it into well-balanced regularity, and the desired form, and by this method you will have the trees in a flourishing state. When the branches are thus managed, they will frequently throw out small spurs, or fore-right shoots, about an inch or two long, which will flower next year. They should never be shortened till after the fruit is set, and become about the size of a large pea; by that time the leaves will have covered the fruit and be able to protect it from the inclemency of the weather. Where convenient, allot one wall for plums and another for cherries, as they always thrive best by themselves.

Management of Gooseberry-trees.—In pruning and training gooseberry-trees, let them always be kept thin of branches, and these not permitted to grow rambling across one another, but all pruned to some regular order, so as the main bearers stand six or eight inches distant at the extremities, and either generally keep the middle somewhat hollow, or if permitted to run up full in the heart, keep it thin of branches, so that you will now prune out any irregularities, retaining young shoots where necessary to supply their places, and cut all the superabundant lateral shoots of last summer close to the old wood, only retaining here and there a good one in vacancies, or occasionally towards the lower parts, to be advancing to a bearing state to supply the place of worn out bearers, and generally leave, where practicable, a terminating leading shoot to each main branch, either such as is placed naturally at or near the end of the branch, or occasionally, where any branch is too long or rambling, prune it down to some lateral shoot, to remain for a terminal leader, and in both cases leave but one terminal to each branch, and all those shoots now retained, both lateral and terminal, should be mostly left entire; for by cutting them very short, they are made to produce a deal of wood, but small fruit, and being so full of wood as to exclude the sun and free air in summer, the fruit cannot ripen well, and it likewise renders it troublesome to get at the fruit when fit to gather. To have gooseberries of the largest size, get young plants of the best sorts, plant them on marly loam, enriched with good rotten dung, reduce them to three leading branches, leaving on each two or three last year's shoots, which may be shortened one third; give water when the swelling season is dry and mulch their roots.

Pruning Currant-trees.—Currant-trees should likewise be kept thin and regular, not suffering the branches to run promiscuously across each other, for when suffered to grow so irregular and crowding, they produce but small fruit. The best flavoured and largest fruit, are produced on the last summer's shoots of strong, but not over luxuriant growth, and it is always in the pruner's power to have quantity or quality, whichever is most desirable. Therefore, it is good management to set apart a number of trees to bear table fruit, and the rest to yield a crop for ordinary purposes. The first are obtained by planting in rich loam soil, then pruning and retaining a scanty crop; the other result, by less severe pruning, and ordinary management. Observe in pruning either gooseberry or currant trees, let those designed for standards be pruned to a clean single stem, eight, ten, or twelve inches, and being careful to retain a requisite supply of the best young shoots properly situated above to form the head, cut out all the irregular and ill-placed.

Forcing Fruit Trees for early Fruit—When there are hot wall or forcing houses, for producing early fruits, as cherries, peaches, apricots, &c., you may now begin to prepare for that business, by shutting all the glasses close, and about the middle of the month begin to make fires, or in the vineries the beginning of the month.

SECOND WEEK.

Pruning Apricots, Cherries and Plums.—Apricots, cherries and plums produce their fruit both on spurs and on the young shoots of last summer, and under the head *pruning* may be very properly classed, in order to prevent unnecessary repetitions. The principal branches may be arranged at the distance of eight or nine inches on a medium, according to their strength, taking as the extremes, six and ten. A few trees of all these kinds, with the exception of the Moor Park apricot and the Morella cherry, are apt to form their spurs in large clusters, which in this case ought to be neatly thinned out; chiefly cutting away the parts farthest from the wall, and retaining those placed nearest to it, in order that the fruit produced on them may be benefitted by its influence. Spurs of apricots in particular, and some of the finer sorts of plums, that are placed at a distance from the wall, though they may blossom easy, and even set their fruit, yet seldom ripen them, especially in a bad climate or a bad season. If, therefore, the tree be in a healthy state, and if there be an appearance of plenty of fruit buds on the shoots and the branches of last and the former years, the extended spurs may be very much thinned away, as the fruit produced on such shoots as can be laid close to the wall will be much superior both as to size and flavour; along with the superfluous part of these clustered spurs, let the fore-right shoots and spray of last summer be cleared away, if they have not been done in autumn, observing always to cut close back to the old wood, and to make clean wounds, not tearing the edges of the bark. This latter precaution is more necessary in the pruning of stone than other fruits, on account of their aptness to gum and canker at every bruise.

Plant Raspberries, if not done in the autumn. Let them be placed in rows, five feet apart between the rows, and four feet from stool to stool in the rows. We prefer planting about three plants in a triangular form for each stool, cutting them down to about two feet high.

Strawberries in Pots should be continued to be brought in every week or fortnight, and plentifully supplied with water. Pick off all mouldy and decayed leaves, or they will soon render the other leaves they come in contact with unhealthy, and, consequently, incapable of performing the part assigned to them by nature.

Cherry Houses will now require much attention. Be particularly careful to admit abundance of air in the daytime. Examine the leaves as they begin to show themselves, and if any are observed to be curled, you may be assured that grubs are inclosed in every curled leaf. Go over your trees, and carefully pick them off with your hands; as soon as the trees are out of bloom, let them be frequently syringed with clear water.

Peach Houses must be paid strict attention to. Where the trees are in flower, or setting their fruit, admit air as early in the morning as possible, and shut up early in the afternoon. The less fire used in forcing the better; moisten the air by steaming, whenever the flues are sufficiently warm for the purpose, say two or three times on a day, and look narrowly after the appearance of the red spider, *Acarus*, or green-fly, *Aphis*. To destroy the former, syringe the trees with a mixture of sulphur and water, the flues with a mixture of soft soap, sulphur, and water. Fumigating with tobacco is the most efficacious method of extirpating the fly.

Pruning Gooseberry and Currant Trees.—These shrubs bear both on the young one or two years wood, and generally upon small spurs rising naturally all along the sides: and in each winter pruning it will be required to cut out any casual worn-out, decayed, and very irregular branches, and a proportionable supply of last summer's young shoots retained, and the rest pruned out. In pruning gooseberries let them always be kept thin of branches, and those not permitted to grow ramblingly across one another, but all pruned to some regular order, so as the main bearers stand six or eight inches distant at the extremities, and generally either keep the middle somewhat hollow, or, if permitted to run up full in the heart, keep it thin of branches as above advised. Cut out all the superabundant lateral shoots of last summer, close to the old wood, only retaining here and there a good one in vacancies, or occasionally towards the lower parts, to be advancing to a bearing state, in order to supply the place of worn-out bearers, and generally leave, where practicable a terminating or leading shoot to each main branch, either such as is placed naturally at or near the end of the branch, or occasionally where any branch is too long or rambling pruned down to some lateral shoot, &c., to remain for a terminal leader, and in both cases, leave but one terminal to each branch; and all those shoots now retained, both lateral and terminal, should be mostly left entire, for by cutting them very short they are made to produce a deal of wood, and but small fruit; and being so full of wood as to exclude the sun and free air in summer, the fruit cannot ripen well, and it likewise renders it troublesome to get at the fruit when fit to gather.

THIRD WEEK.

Forcing Cucumbers and Melons.—About the middle of the month a seed bed may be prepared for raising early cucumbers and melons. Some begin sooner, but it is striving against the stream to little purpose. If the dung be prepared and the bed be got ready, so as to sow the latter end of the month, or the beginning of next, the success will be often greater than by sowing a month earlier, the growth of the plants being frequently choked by bad weather, and sometimes they are entirely lost. The dung should be carefully fermented and the bed built to the height of five feet at the back and four in the front, keeping it a foot larger than the frame all round. The frame here meant is for one light, about five or six feet by three or three-and-a-half, which is sufficient for the purpose of raising seedling cucumbers and melons to an ordinary extent. The bed being furnished, turfed over, and the frame put on, lay in it fine dry sand, as free of earth as possible, to the depth of about six inches, laying it in a sloping manner, corresponding with the glass, and to within six inches of it, over which lay an inch or two of dry, light earth. The seeds may be immediately sown. Some wait till the heat rises, but it is losing time; besides, by sowing now, vegetation is brought on by degrees as the heat rises. They should be sown in fine light earth, or, if it can be obtained, in vegetable mould of decayed tree leaves, covering to the depth of about half an inch. The seed should be sown in a broad pan, four inches deep, or in small pots four or five inches in diameter, and as much in depth, which should be plunged to the brim near to the back part of the bed. Now put on the light, and let the frame be matted up at night, in the ordinary way. No air need be admitted till the heat begins to rise, and steam begins to appear, but after that the light should be tilted a little every day, in whatever state the weather may be, until the plants break ground. Air must then be admitted with more care, and if frosty or chilly, the end of a mat should be hung over the opening, that the air may sift through it, and not immediately strike the plants. A little aired water may be given once a day from the time the plants begin to chip, and if a very strong heat rise, the pots should be raised a little, to prevent the roots being injured. They should be frequently examined on this account, and if the heat be violent, should be set loosely in the sand, or be placed entirely on the surface. The air of the bed should be kept to about sixty-five degrees in the night, allowing a few degrees of a rise in sunshine. If the weather be severe, therefore, the mats must be doubled or trebled, and if mild, perhaps a single one may suffice; but, unless in very bad weather, they should always be removed by sunrise, in order to admit all the sun and light possible to the plants, which is very essential.

Gooseberry and Currant Trees.—Propagate gooseberry and currant trees by cuttings taken from the branches. The strongest last summer shoots should be chosen, rejecting the rank luxuriant ones, as they never make handsome trees; trim off the knobbed bottom and slender points of the cutting, leaving about fifteen inches of its length. Next cut out every bud from the lower part, leaving only three or four at the top to form the future branches. Thus prepared, the cuttings should be dibbled into good moist soil about one-third of their length; disbudding the cuttings prevents suckers arising from the roots, or over-luxuriant shoots from the stem; which last always remain clear and of proper length.

Propagation of Hardy Fruits.—Begin to prepare some ground, where it is not wet, for the reception of the stones and kernels of hardy fruits, in order to raise a supply of stocks for the purpose of budding and grafting upon. These, if mild weather, may be sown about the middle or latter end of this month; sow them on beds four feet wide, cover the stones an inch and a half deep at least with earth, and the kernel nearly an inch; the plants will appear in April or May, when they must be kept clean from weeds, and moderate watering in dry weather will be serviceable when they are newly come up. Some of them will be fit for transplanting in nursery rows next November, and the following planting months, or at least all of them the second autumn or spring.

Peach Trees.—Attend to the nailing of peach trees; but before being nailed, let them be washed and anointed, both for the destruction and prevention of insects. This is an important business, and should not be neglected; no time in the year is so well calculated for the operation as the present season, when the leaves are off, and the trees disengaged from the wall for the purpose of pruning. Many preparations have been recommended for this purpose. Although every gardener has his own approved composition, which he finds from experience answers his several purposes, either for the removal or prevention of his insect enemies, yet sulphur and tobacco seem to be the substances adopted and recommended by the majority of gardeners, with the addition of soap, probably for its adhesive property in making the others remain longer on the trees than they otherwise would.

Pruning Vines.—The first rule is to prune as soon in the autumn as the wood is sufficiently ripened, for the sooner this is done, the stronger will the vines shoot in the spring, and be less liable to bleed. When you begin to prune, always make choice of the strongest and longest shoots, leaving them as long as you find the eyes good and plump and the wood sound; therefore, never leave any but fine strong wood. As soon as pruned, let them be immediately nailed up straight and close to the wall, at the distance from ten to twelve inches apart.

FOURTH WEEK.

Pruning Peaches, Nectarines, and Apricots.—These trees may be pruned any time this month if the weather should prove mild, but it is better to defer this work till the month of March. In the training and pruning of peaches, nectarines, and apricots, little or no difference is to be observed. They produce their fruit principally upon the young shoots of the former summer, a plentiful supply of which must be reserved annually to train in for bearing; they also sometimes bear on the small natural spurs arising on the two or three years wood, which generally occur more frequently in the apricots, and all such spurs should be carefully preserved, for they generally bear good fruit, keeping in mind, however, that the young yielding shoots are to be considered as the general bearers, observing that as the general branches or bearing shoots are to be trained to the wall at various distances, we must prune out annually all that cannot be trained in with proper regularity, leaving a general supply of the best of the last year's shoots in every part of the tree, to bear the fruit in the succeeding summer. Each of the said shoots must be at the same time shortened more or less according to their strength, in order to encourage them to produce a regular succession of bearing wood in the ensuing summer. Before you begin to prune, it is proper to unnail all the young shoots which were nailed in last summer, if not already done, as it should be, in the previous November, and great part of their respective mother branches, by which means you will have room to use your knife properly. In the course of pruning these trees, be careful to select the most promising and best situated shoots, advancing, as it were, one after another in every part of the tree, making room for them by cutting out all the other useless shoots, together with a proportionable share of the former bearers before alluded to, and old naked branches not furnished with bearing wood.

Forcing Strawberries.—The first sot of strawberry plants for forcing may be got ready during this month, and placed in a cold pit or frame, to be ready by the beginning of February, to be put into action. For this purpose, select some of the strongest plants of Alpines, Keen's seedling, or scarlets, as they succeed best for the earliest crops. In whatever way strawberries are forced, they should have air freely admitted to them in good weather, and be plentifully supplied with water at all times, until the fruit begins to ripen off which should then be very much withheld, lest the flavour be rendered insipid. If forced in a stove, grape-house, or the like, they should be placed on shelves near to the glass, as, if placed a great distance from it, the foliage would be much drawn up, and the fruit would be apt to drop off in setting. There are different ways of preparing the plants for forcing. Some force old roots or stools, and others the runners only. Those who force the old roots, generally lift and pot them about October or November, lifting a bulk from the bed or row, nearly sufficient to fill a nine or ten inch pot, of plants three or more years old. Others plant runners of the former year in April, three or four in a large pot, or two in a middle sized one, and plunge them in the earth all summer, giving them occasional waterings, and taking proper care of them. These succeed better than old roots, treated as above. We generally prepare our plants in the following manner:—In July or August, we plant runners of that season, three in a nine or ten inch pot, and having watered them, we place them in the shade for a few days, then plunge them to the brim in a freely exposed situation. In October their leaves are dressed off, and the plants trimmed, and before winter they are covered with a little dry litter, in order to preserve the pots from the effects of frost. The following spring any flowers that make their appearance are pinched off, and throughout the summer the plants are occasionally refreshed with water, and kept clear from weeds. In autumn the leaves are again dressed off, and when taken up for framing, the tops are finally dressed, and fresh earthed.

Plant Raspberries.—Fresh plantations of raspberries must now be made, observing to procure young plants that are each furnished with one strong shoot of last summer, preferring those with good fibrous roots; prune off the weak tops of the shoots, and the long straggling roots, and plant them by opening small apertures with a spade, in rows four feet and a half asunder, and three feet distant in each row. They should never be planted closer, as the advantage of it will be seen in two years' time, for when planted too close, they will in the summer season form a perfect thicket, insomuch that the fruit will be small and not ripen with a good flavour, nor can you come at them readily when they are fit to gather. These plants should be planted in an open situation. The best varieties of this fruit are the red Antwerp, the yellow Antwerp, Brentford, Wilmot's early red, double bearing red, and the large Barnet. Raspberries may be trained advantageously. Drive stout stakes along the rows; to these nail laths cut for the purpose, at eighteen and forty-four inches from the ground, and tie the shoots regularly thereto.

Planting Fruit Trees.—If a plantation of fruit trees, either on walls or in the orchard, be in contemplation, it will be very proper to set about preparing the borders at this time.

THE KITCHEN GARDEN,

FIRST WEEK.

PREPARING *(for early crops)*.—As early productions of several sorts of kitchen garden vegetables are in particular request, this is now the season to make preparations to raise the respective sorts required, in early perfection, by means of hotbeds, and by culture in the natural ground. But as some sorts of the more tender species are to be obtained only by aid of hotbeds, such as cucumbers and melons, and others of a more hardy nature, when in request in the earliest season, require also the assistance of hotbeds, such as salading, radishes, asparagus, kidney beans, peas, &c., now proceed to procure necessary supplies of hot dung, composts, and other requisites. And for several natural crops in the open ground, you should now prepare warm borders, and other similar compartments for their reception, by manuring where necessary, and giving a good digging if not too wet, ready for early peas, beans, radishes, spinach, &c.

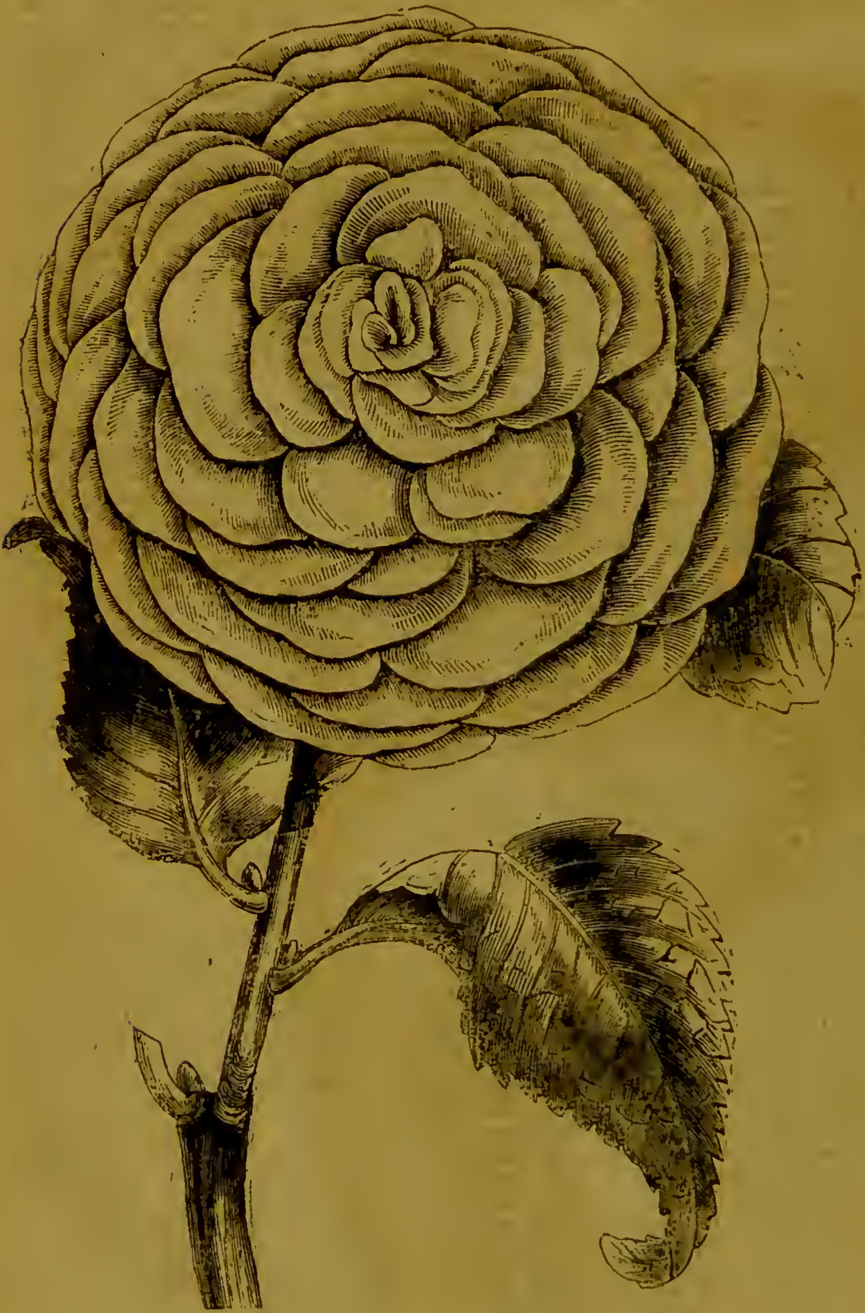
ASPARAGUS (*to force*). — Asparagus may be brought to perfection in hotbeds at any time from November, till it comes into the natural ground. Those who wish to have it at Christmas, should begin to prepare a bed or beds about the middle of November; as the process of forcing, however, does not materially differ, at any season from November to March, we shall choose a medium time, and will begin with the year. The intelligent reader will make allowance for the season, and proportion the strength of the beds accordingly, which forms the chief difference, together with the admission of fresh air, as the state of the weather will permit. A moderate heat is sufficient for the production of asparagus, and rank steam is pernicious, both to its colour and flavour. The dung, or litter to be used should be well fermented. The frame should be about two feet deep at back, and a foot deep at front, and if a few inches deeper it would be nothing the worse. It is not very material in what kind of earth the roots be placed, provided it be light and dry. We have used old bark, reduced to a fine mould, often without any mixture of earth, and have sometimes mixed it with fine sandy earth, with little difference in the success, only we have observed, that when the roots were placed in bark entirely, the buds would come a few days earlier. If old bark cannot be had, any dry, light, and moderately rich mould will answer in which to bed the roots, which should be laid on the turf to the thickness of three or four inches. The roots being covered with litter, so as to be easily come at in the case of frost being in the ground, should be carefully lifted and be trimmed of rotten fibres, haulm, or other rubbish. They should not be under four years old, nor above eight, for if younger, the grass will be small and trifling, and if older, many of the buds will not spring, and so much trouble would go for nothing. They should be placed with their crowns upright, as closely together as possible, spreading out and intermixing the fibres, and keeping the crowns quite level, that they may be equally covered with mould. It should be rendered very fine, either with the spade or by being sifted, and it should be laid on to the thickness of four inches, smooth and equal. A little dry earth may also be laid on outside; all round the frame, and over it, planks to stand or walk upon. Some further directions will be given in a future number.

BEANS, (*French*).—French beans may now be sown in flat boxes or pans, placed in any early forcing house, or in a warm frame, afterwards to be transplanted into large pots, to stand in those compartments, or to be planted out in a slight hotbed, or into a flued pit, as shall be thought most proper. The speckled dwarf is the best kind to sow; they should be sown thickly in fine light earth, and be covered to the depth of an inch. Let them have moderate supplies of water, and they will be fit to plant when about three inches in height.

CARROTS.—Prepare a bed for carrot seed. For this purpose let a piece of light ground be chosen, and let it be dug two spades deep, and perfectly pulverised. Let the seed be scattered thinly upon it and raked in, and let a little loose pea straw be thrown over to keep off the extreme effects of the frost, which may naturally follow at this time. It must not be thrown in so close as to block up the ground, for a free air is necessary to vegetation, neither must the young plants be raised so tender as to fall by the next frosts after the stem is removed. Only a slight sprinkling of it best answers the purpose.

CAULIFLOWERS.—Examine well the cauliflower plants under glasses, stir the surface of the mould within the glasses, and dig it up round about on the outside. Take off all dead leaves, draw the mould up a little about the stems, and in the middle of the day, unless when the frost continues very severe, raise the glasses upon a couple of bricks, and give them a little air.

(*Continued on Page* 18.)



THE CAMELLIA.—(*See P.*

THE TULIP.—(*See P.* 24.)

THE KITCHEN GARDEN.

CONTINUED.

BEANS, (*Broad*).—In the beginning of this month, and again towards the end, if the weather be open, let some ground be got ready for a main crop of broad beans; the principal large sorts are the Sandwich, Tokes, Windsor, broad Spanish, and broad long podded beans. You may plant also the broad Spanish, long podded, or any sort of garden beans that are most approved of, and if some small early magazan or Lisbon beans were not planted beford Christmas, or have suffered by the frost, let some of the same kind be now planted the first mild open weather, either in rows two or three feet asunder, where they are to remain, or sow some thick in a bed, or part of a warm border under a frame, for transplanting. When they are advanced one or two inches in growth, transplant them in a warm south situation, in rows two feet and a half asunder, or where there is the convenience of a hothouse may sow some thick in a large wide garden pot or two, placed therein, and when the beans are come up about an inch in growth, inure them by degrees every mild day to the full air, to harden them for transplanting.

CELERY.—Earth up late celery in open weather, if the plants have hitherto stood the winter in good condition and are of some length above ground. A small bed of light rich earth may now be prepared in a warm border, to sow some upright solid celery seed in, for an early crop.

ENDIVE.—Sow some endive seed for a spring crop. Dig up a border in a dry place, throwing on some sand, and blending it well with the mould. Round it high, that no wet may lodge, and draw lines lengthways and across, at fifteen inches distant, plant one root of endive in the centre of each square. The plants are to be brought directly from their bed, with a ball of their own earth, and such must be chosen as are fullest of leaves. and have them most curled. Let the mould be gathered up about each plant, in a kind of hill, and let the bed have a little water between them; after this they will require only to be now and then watered in very dry seasons, and to have the weeds always cleared away from between them.

LETTUCE.—Lettuce may be sown the beginning of the month, if the weather be mild and dry; an early warm spot is to be chosen, and a rich light soil; the kinds fittest for this sowing are the brown Dutch hardy green white cos, and green cos; sow rather thickly in order to afford plants for transplanting in March, cover lightly, and rake all in smooth and neatly; do not tread or beat in the seeds.

MINT.—Make a small hotbed for some mint, when it is required for salads and mint sauce, a bed of one light will be sufficient for a moderate family, about two feet thick of dung. Lay about four or five inches depth of earth on the bed, but if small quantities only be wanted, a few pots of each previously prepared, and planted in any hothouse or warm frame, will yield a sufficient supply.

MUSHROOM BEDS.—Let some dry straw be put upon the mushroom beds to preserve them from frost and wet, and change it every third day.

SPINACH.—Sow round spinach the beginning of this month, in a rich warm spot, to come in as an early spring crop, and to succeed the winter crops; it is better to sow in shallow drills, ten or twelve inches apart, and not too thickly; sow some in beds, but it is more troublesome to keep clean than when sown in drills.

SECOND WEEK.

ASPARAGUS.—New beds may still continue to be planted on a slight heat. With respect to the asparagus now advancing, care must be taken to keep the bed as clear of steam as possible, and air must be freely admitted in order to give the buds flavour. A moderate quantity of water may be given once in three or four days, if the heat be not violent, and if otherwise, oftener, but if the dung were properly fermented, and the bed carefully turfed, according to the directions already given, the heat should be mild, and little steam should appear by the time the buds have come. If the weather be severe, cover at night accordingly, but uncover betimes in the morning, that the buds be not drawn up weakly and ill-coloured.

BEANS.—If the early kinds have not been sown as already directed, they may now be sown, and the sooner the better. Plant also for a full crop the long pod or Windsor kinds, in a free and open exposure, in rows, twenty-four or thirty inches asunder, and five or six in the row. In free soils the setting stick may be used, but in stiff land it is better to drill with the hoe, about three inches in depth. On a good dry day, stir up the surface with the hoe or rake amongst beans that have been sown in October or November, and are now above ground. This is of very great service to the crop, particularly if it grow in strong soil. Towards the end of the month repeat this stirring, and draw a little earth to the stems of such crops ds are most forward, being careful, however, not to cover up the heart of the plants.

CABBAGES.—Some cabbage seed may now be sown for crops to succeed those sown in August, and planted out in October. Sow on a rich, light, open spot thinly, and do not cover the seeds too deeply; an eighth to a quarter of an inch is covering enough for these or any sort of *Brassica.* Rake all smooth, but do not tread the ground at this early season. Treading may be proper on light soils in summer, but in spring and autumn it is not so; on heavy land it is never so, especially in the sowing of small seeds. Sow also a little red cabbage; choosing the dwarf, dark red, or purple kind. The cabbages planted in October should now, in good weather, have a little earth drawn to their stems. Observe to stir the ground well amongst the plants, which will greatly encourage their growth.

CARROTS, for an early crop, may be sown on a light border or other sheltered spot, but it is soon enough to sow the principal crop the beginning of April. The seed for this crop may be either sown broadcast or in drills. If broadcast, shed as equally as possible, cover lightly, and take all smooth; do not tread the seed. If in drills, let them be shallow; half an inch in depth is enough, and ten or twelve inches apart. Cover with the hoe or rake, and dress the surface fine. The early horn is fittest for the present sowing, though the orange may answer very well. Attend to the carrot as sown in December, and let them be cleared of weeds, have moderate supplies of water, and free air admitted every day according to the state of the weather.

CAULIFLOWER.—Sow on the borders of rich earth for a succession of summer cauliflower. The border in front of a stove, pit, or early forcing house, is a very eligible situation, and preferable to a hot bed. These will be ready to plant out the middle or the end of next month for an early crop, but observe not to plant them too deep. If it be intended to cover with hand-glasses, a few to come in the earliest, they may be planted so as that a glass may cover two plants, but if bell-glasses are to be used, one under each will be enough.

CELERY.—Celery, for an early crop, may now be sown; choose a rich light bed of earth on an early border, or sow at the bottom of a wall or other fence; cover lightly and rake fine. If this vegetable be required very early, its progress may be promoted by being covered with a few hand-glasses, or a frame and lights. But observe, this sowing is not to be depended upon for a crop, the plants raised so early being apt to shoot for seed; upright solid celery is the best to sow at this season.

CHIVES.—Chives are a substitute for young onions, and are used by many, both in the kitchen and as salads: they will grow in almost any soil, and are easily propagated by sets. Plant in rows eight or nine inches asunder, and four or five in the rows. Should severe weather come on, some peas haulm or other covering may be thrown over the plants.

ENDIVE.—Lay in a further crop of endive for blanching. Take up a parcel of endive plants from their common bed, choosing such as have the most and the best curled leaves, draw some cords across an airy, cool room, and tie up these plants with the roots upward. The wet draining from their leaves, they are thereby exempt from the common accident of rotting on the ground before they begin to blanch. Open a trench in a dry part to the south, and lay in the endive plants after they have hung all night, in the south side of the ridge. Bury them within half an inch of the top, and take care that there be such a slope that water will run easily off. They will blanch regularly, and will obtain a fine colour and a good flavour.

FRENCH BEANS.—Sow more French beans, if a succession of them be required to succeed those already sown. Sow either in boxes or pans, in the stove, &c.; in pans placed in a cucumber or melon frame, or in any other hotbed where there is room. Let them be duly supplied with water, and when fit, plant them out. The plants, when about three inches high, are fit for transplantation.

HORSE RADISH.—Plantations of this vegetable may now be made. Any soil, especially if light, will answer. Dig deep, and plant the sets in furrows, by line, as you go on, eighteen inches between, and six in line. Place the sets upright, and keep their crowns just above the ground. If they be three inches in length, it is sufficient, and it is immaterial how much longer they be. If such sets as these cannot be procured, cuttings of the roots without crowns may be planted, and will succeed very well, only they will not be useful so soon. They may be cut into pieces of three or four inches in length, and may be either planted as above, but entirely within ground, or with the setting stick. A little lettuce or spinach may be drilled in between the lines, which would come off in time, and without injuring the crop.

LEEKS.—A few for the first plantation may be sown in a bed or beds along with the onions, only considerably thicker. The prir cipal crop, however, should not be sown till March.

Lettuce.—Lettuce may still be sown for crops to succeed those of last month, in a sheltered situation: the crops of winter lettuces should be thinned: hoe and stir the ground about the plants, whether it be clear from weeds or not, which will greatly encourage their growth. These plants may be thinned out by degrees, and as they are wanted for use; but if it be wished to have them grow to full size, they should be finally thinned out to nine or ten inches apart.

Parsley.—Parsley may again be sown for raising successional crops in cases were young parsley is in demand, and the Hamburgh sort for stewing may now be also sown.

Peas may now be sown on an early border, or other warm situation, if the weather be open, and the ground be pretty dry. The early frame or Charlton are the most proper for sowing. They may be sown in a row by the bottom of a wall or hedge, or in longitudinal rows in an early border, which is better than in cross rows, for if sown across the border, the one end of the rows will be fit for use, when the other end is scarcely in flower, which is a great inconvenience, especially in cases where ground is scarce for border crops. The drills should be about three or three-and-a-half feet apart, according to the quality of the soil, and two full inches deep. Do not sow too thickly. Cover with the hoe or rake, but do not tread them in, as treading bends the ground too much at this early season. If the ground be in good heart, it need not be manured. Peas are often used in forcing houses, and are brought to very early perfection; they may now be sown, if not done in October or November. Sow them in boxes, and transplant them, when an inch and a half or two inches high, into the borders of some forcing house, either in a single row, or in rows, if you have room, fifteen or eighteen inches apart, and two inches in line, and give a moderate watering in order to settle the earth about them. In forcing peas, they should always be transplanted. They become more prolific and run less to straw by that management than when they are sown where they are to remain. Indeed, it would be very well worth while to transplant the earliest crops in the open ground.

Spinach.—Sow round spinach about the latter end of the month, in a rich warm spot, to come in as an early spring crop, and to succeed the winter crops. It is better to sow in shallow drills, ten or twelve inches apart, and not too thickly. Sow some in beds, but it is more troublesome to keep clean than when sown in drills.

THIRD WEEK.

Asparagus.—Hotbeds for forcing asparagus may be made, with success any time this month, which will furnish young asparagus for the table next month and in March. For this occasion plants must be obtained that have been raised in the natural ground till of three or four years' growth, of a proper size and strength to produce crops of good sized asparagus, and must be provided with plenty of good hot dung, wherewith to make substantial hotbeds, two feet and a half or a yard high, and with proper large frames and glasses to place on the beds, and garden mats for covering on nights.

Cabbages.—Plant out a full crop of cabbages to succeed those planted in autumn. The kinds are the early dwarf, Battersea, York or sugar-leaf, any of which, if the weather be open, may now be planted. Plant in good land in an open exposure, and do not be sparing of the dunghill; likewise be sure to dig deep, and to cover the manure well in. From eighteen to twenty-four inches square, according to the quality of the soil, is a good distance at which to plant. Red cabbages may now also be planted, in every respect as above, if of the dwarf kind; if of the tall, which is not the best kind, allow a little more room.

Cauliflower Plants.-Cauliflower plants in frames should have free air, every mild day, by taking the glasses entirely off. If the weather be mild and settled, some of the strongest plants may be transplanted into the place where they are to remain. Plant them in rich well-dunged ground, thirty inches or a yard distance each way, but if cold and unsettled weather, the planting may be deferred for a short time. In transplanting cauliflowers, if it be necessary to make the most of the ground, you may on the same compartment sow a crop of spinach and radishes, a week or fortnight before the cauliflowers are planted, and by the time the latter begin to advance considerably, the others will be gathered off for use, without retarding the growth of the cauliflowers.

Carrots.—Prepare some ground in which to sow carrots. These roots grow largest in light ground, and the further from trees the better, for they thrive best in open exposure. The carrot requires a light mellow soil. The Altringham and orange sorts, on account of their longer roots, require a soil proportionably deeper than the early horn. The beds may be four or five feet wide, or for large crops the seed may be sown in one continued plot. Transplant some of the carrots, parsnips and beet for seed. Let them be planted in rows, two feet asunder, and covered over the crowns.

Celery.—Earth up late celery in open dry weather, if the plants have stood the winter in good condition, and are of some length above ground. Prepare a small bed of light rich earth in a warm border, to sow some upright solid celery seed in for an early crop. Break the earth very fine, sow the seed on the rough surface, and rake it in lightly, or first rake the surface smooth, sow the seed thereon, and cover it with light earth sifted over nearly a quarter of an inch deep, or, the ground being formed into a three or four feet wide bed, and the surface raked, then with the back of the rake trim the earth evenly off the surface, about half an inch deep into the alley, sow the seed on the bed, and with the rake draw the earth over it, and trim the surface smooth. But those who desire to have the plants come in pretty forward should sow the seed in a slight hotbed, under a frame and lights, or handglasses, or in default of these, cover on nights and bad weather with mats, being careful in either method when the plants are coming up to admit the free air every mild day. The plants raised from this sowing come in for use in June and July. There should not be many of these early sown plants planted out, only a few to come in before the general crops, for they will soon pipe in the heart, and run up for seed.

Lettuce.—If the weather be mild and dry, a little lettuce seed may be sown upon a dry, warm border. The brown cos, hardy green cos, or white cos, are the most proper sorts for the season, which will afford a supply for planting out in March. In order to ensure this supply with greater certainty, it will be advisable also to sow a part of those as well as some large Roman, common white cabbage lettuce, hardy green cabbage lettuce, and, indeed, any variety that may be more esteemed, upon a slight hotbed, in light rich mould.

Lettuce Plants, from seed sown in autumn in frames, under hand-glasses, hoop arches, defended with mats, &c., should enjoy the open air whenever the weather is mild and dry, taking care to remove dead leaves, weeds, or any vegetable matter likely to cause decay amongst them, and the surface should be repeatedly stirred for a like purpose.

Mint.—At this season mint is in demand for salids and sauces, &c. Plant the roots in pots, which place in any of the hothouses, or in a hotbed frame. A few pots of mint will supply a large family.

Mushrooms.—Mushroom beds, if in the open garden, should be carefully attended to at this season; they should have sufficient covering to protect them from the frost, rain, or snow; and such covering should not be less than twelve inches thick; should heavy rain or snow have penetrated through the covering, it must be removed, or the spawn will be in danger of perishing. Common hurdles, thatched with wheat or rye straw, are an excellent top-covering for such beds; it is, however, necessary to have a protection of straw or fern under them, in order to resist the frost.

Onions and Leeks.—Some ground may now be got ready for sowing onions and leeks. Both these vegetables require rich and mellow ground; the onions may either be sown broadcast or in drills, but in either way the seed should be laid in shallow, and firmly trodden in. A small seed bed of leeks may now be sown, in order to raise plants, for putting out for good in the months of May and June. Some persons, particularly the market gardeners of Hexham in Northumberland, sow their onion seed in the same ground for twenty years together, but annually manuring the soil. After digging and levelling the ground, the manure, in a very rotten state, is spread upon it, the onion seed sown upon the manure, and covered with earth from the alleys. The crops are abundant, and excellent in quality.

Parsley.—Curled parsley may now be sown, either as an edging to an alley or walk, or in rows in the open quarters; the curled only should be sown, as being not only the best, but also less likely to be mistaken for the poisonous plant, hemlock, which bears some resemblance to the common, or plain-leaved parsley. It should be sown broadcast, and when the plants have acquired five or six leaves, those which are the most densely curled should be taken up, their roots reduced to three or four inches, and planted out in a bed, in an open part of the garden, at eight or nine inches apart from each other, keeping the ground properly clean through the summer. In the autumn the plants will have attained their full size, when the very handsomest should be again selected, taken up, and planted out again in the most open and exposed part of the garden for seed.

Radishes.—Short topped, red, and white turnip radish should be sown in a slight hotbed, once a fortnight, a few of each may also be sown upon a warm dry border in the open air. Those later should be protected in cold weather, and always at night, by being covered with mats, supported upon hoop arches, by being covered with straw, fern, or long litter.

Small Salading.—Cress, mustard, and other small salading should be sown once a fortnight, upon a slight hotbed, or under hand-glasses, placed on a slight bottom heat, or, which is much better, in shallow boxes or pans in the hothouse.

Spinach.—Winter spinach will now advance in growth; clear out all weeds, and thin the plants. For use as wanted, some spinach may now be sown, either broadcast and raked in, or in drills a foot asunder. Spinach may be sown between two rows of cabbage, cauliflowers, and beans, or the like, if ground be scarce. The smooth seeded, round-leaved kind is the best to sow now, and if desired to have a constant supply, let the sowings be repeated every fortnight or three weeks.

FOURTH WEEK.

Asparagus (*to force*).—The most general mode of forcing this esteemed vegetable is by making dungbeds in the usual way, about three feet high, of well prepared dung: the frames and lights being put on, the bed should remain till such time as it has thoroughly attained a regular heat, and has, as it is technically termed, well sweated itself. When this has taken place, level and tread the surface regularly over. If there be any apprehension of a violent heat taking place, after being thus prepared, the surface should be covered with turf, cut thin, and so placed with the grassy side undermost, that the joints may so unite with a slight beating with the back of a spade, as to prevent the steam from rising into the bed, which would be extremely detrimental to the crop in a state of vegetation. However, unless it be suspected that the heat has become too strong by the dung not being properly prepared previously to forming the bed, this covering will be rather detrimental to the heat that is really necessary, by preventing it from rising, and may in such cases be dispensed with. The roots are generally taken from the asparagus beds in the garden, and it is immaterial of what age the roots may be, provided that they are strong and vigorous, and have produced a good crop of strong shoots the preceding season. Some gardeners lay much stress upon the age of the roots, some recommending roots of two years' growth and upwards. It is, however, certain that roots of thirty years growth will succeed as well as those of four or five years standing. It must, however, be admitted than plants above four years' growth, are to be preferred to those under that age. In forcing asparagus, it must be allowed that the gardeners of this country cannot vie with the Flemish in the cultivation of this esculent. The Dutch and German gardeners force asparagus in the beds in which they grow, for which purpose, about the end of October, they dig deep trenches between the beds considerably below the roots; these beds are about two and a half feet wide, and the same space is between them. This space they fill up with fresh, unfermented dung, leaves, and everything else that will create a strong heat. The tops of the beds are stirred up and covered also with hot dung; by this process the roots are excited, and an abundant supply of crop obtained.

Beans.—Some gardeners commence forcing kidney-beans during this month in pine stoves. For this purpose, pots of nine or ten inches in diameter should be well drained, and half-filled with rich, turfy, loamy soil, which should be as dry as possible, having, it is presumed, been kept during the winter under cover, in a shade or otherwise. The kidney-bean succeeds best in a rich light soil; therefore, if loamy turf mould cannot be obtained, very rotten dung, and a portion of rich garden mould, may be used as a substitute. About the beginning of the month, approved sorts of these beans may be sown in flat boxes, pots, or pans; they will, if supplied with water and placed in a stove, soon vegetate and be fit for transplanting into the large pots prepared for them; the principal crops. however, should not be attempted till the beginning of next month.

Cabbages.—The plantations of both early and late cabbages planted in Autumn, will now require to be thoroughly examined, and all deficiences made good. The ground between the rows should in dry weather be stirred with the hoe, both to destroy weeds, and also to encourage the growth of the plants,

Carrots.—Prepare a good piece of ground for carrots. It will greatly assist this crop to dig in a good quantity of old, and thoroughly rotted manure, mixed with sand, and to blend them very carefully together. Nothing but very old dung will do for this, for if such as is new should be used, the carrots will be ill-tasted and worm-eaten. The dung that comes from an old hot-bed, and is perfectly decayed, is the best and with this assistance the carrots will not fail to grow with a strong, single, and straight root, without splitting or shooting sideways, and they will be tender and well-tasted. More depends upon this management than it is at first thought of; there is no other way to bring this excellent root to its full perfection. In gardens as commonly managed, carrots are rank, though tender, and in fields they are sweet, but apt to be hard. This management is the only method of bringing them to have the advantages of both these cultures, without the disadvantages of either. They will thus have the sweetness of the field and the tenderness of the garden carrot. Level the surface, mix with the seeds a good quantity of sand, and choosing a calm day, scatter them on as equally as possible, tread over the ground, and then rake the seeds in. Observe when the plants come up, for the weeds will rise with them. As soon as they have a little strength, let them be thinned and cleared. In small pieces of ground this is best done by hand, because the worst plants can be so taken up and the best left; in larger quantities the hoe is commonly used. The plants should be left at about five inches distance. This method will answer very well for those which are intended to be taken up young, but if they are for growing to the full size, they must, about three weeks after, be cleared of weeds again, and then thinned to the distance of eight or nine inches. After this, the ground being kept clear from weeds, they will make their own way to perfection, and will not fail to have their full fine flavour.

CELERY.—Take advantage of a dry day, before the setting in of frost, to earth up celery that requires it. Let the earth be well broken, and laid up to the plants lightly, so that they may not be crushed down or bruised, raising the earth very near the top of the plants, for if severe frost sets in, it would destroy, or, at least, greatly damage such parts as are above ground, and would occasion a great part of that within to decay or rot downwards.

ENDIVE.—For the greater certainty of blanching and preserving good endive at this season, there may be laid a quantity of light dry earth, or sand, into any dry shed or other covered place, in a light ridge or round heap, and bury the endive therein, or lay some dry earth or old tan in a deep garden frame, in a ridge, and in which plunge your endive, and when the weather is a frost or wet, the glasses may be put on, and other covering if necessary. By this method good endive may be obtained in the severest weather.

LETTUCE.—Thin the crops of winter lettuce; hoe and stir the ground amongst the plants, whether it be clear of weeds or not, which will greatly encourage their growth. The plants may be thinned out by degrees, and, accordingly, as they are wanted for use; but if it be wished to have them grow to full size, they should be finally thinned out to nine or ten inches apart.

PEAS.—Early frame, early dwarf, and Charlton peas may be sown any time this month, and the crops sown in October and November, which will now be above ground, if they have survived all accidents, should be protected, if the weather be severe. Peas may now also be sown in pots or upon a slight hotbed, in order to be transplanted in March. Dr. Lindley approves of this method, for he says, "A much better way of obtaining an early crop, and at one-twelfth part of the trouble, is to sow the peas in January, in shallow pots, and place them under a common frame, where they may be protected from frost. Towards the middle of March, the plants must be turned carefully out of the pots so as not to injure the roots, and planted out an inch apart in drills under a south wall, at three feet and a half, or four feet, drawing a ridge of mould six inches high at the back of the plants, and protecting them by a few closely placed spruce fir branches on the north side. In this manner peas may be brought much forwarder than those sown upon the borders, and under the greatest care and attention."

RADISHES.—In order to have radishes as early as possible, recourse must be had to the assistance of hotbeds, therefore, any time in this month, make a moderate hotbed for one or more garden frames, with about two feet depth of dung, sufficient just to promote the early germination of the seed, and forward the plants moderately without running them up long shanked, &c. When the bed is made, set on the frames, lay in about six inches of good light garden earth; then, having some seed of the best early dwarf short-topped radish, sow it evenly on the surface, press it into the earth with the back of the spade, and cover it half an inch deep with light mould, and put on the glasses. When the plants appear, give them a large share of air, either by taking the glasses, &c., entirely off in open mild weather, otherwise they will draw or run up long-shanked, and be spoiled; and after the plants have been up a few days, thin them regularly with your hand, where they stand too thickly, and leave the strongest plants standing, not less than an inch asunder. Support a gentle heat on the bed, when it declines, by applying a moderate lining of hot dung.

CULTURE OF THE TULIP.

The tulip may be considered as one of the greatest ornaments of the garden, and it may be said to stand pre-eminent in general estimation. Like the majority of bulbs, it is a native of the Levant, and was brought to its perfection in Holland, where tulip fancying was at one time a mania, and the bulb is still an article of considerable trade. The finest tulip gardens are at Harleam, which has a warm and saline climate, with a soil light and rich. Round the roots, and over the beds, sand is freely scattered, so that the tulips seem as if growing from a sandy beach. In planting the bulb in this country, follow the same practice. Before planting, take off the brown outer rind; plant in October or early in November, so that the plant will blossom in April. In forming a bed of tulips, the bulbs should be set at a distance of seven inches apart, and in straight rows, taking care to mix the different colours. To raise from seed, or to improve the varieties by crossing, is a waste of time, and not to be thought of in ordinary circumstances. Bulbs can be obtained from nurserymen; the price varying from five shillings a dozen to five guineas and upwards a bulb; half-a-crown each is a common price for tolerable bulbs, but, of course, all depends on taste.

In order to have tulips in anything like perfection, they require a great deal of care, as strong sunshine injures them; they must either be placed in some shady situation, or covered with a slight covering from the sun's rays. They must also on no account be allowed to go to seed, for, in that case, the bulb is exhausted and done. In order to prevent this catastrophe, they should be watched when they approach perfection, and the head and stalk cut off. A usual signal for cutting is, when they cease closing at sunset, or when the edges of the petals exhibit the slightest appearance of withering; they should be cut rather too early than too late. After cutting, admit the sun to the stems; and when these wither, which may be in June or July, lift the bulbs and lay them aside in a dry, airy situation; there let them remain till the period for planting, which is the end of October, or the beginning of November. If the bulbs require to be sent to a distance, twist each separately into a piece of paper. In this state, and kept dry, they will remain dormant, yet fresh and ready for planting, for years.

The following may be said to be the criterion of a fine variegated late tulip. It is generally agreed amongst florists, that a fine tulip should have the stem strong and erect, about thirty inches high above the surface of the bed; the flower should be large, consisting of six petals, which should proceed at first a little horizontally, and then turn upwards, forming almost a perfect cap, with a round bottom, rather wider at the top. The three outside petals should be rather larger than the three inside ones, and broader at their base. The petals should not be notched nor serrated, but perfectly entire at their edges; the top of each petal should be broad and well rounded. The ground colours of the flower at the bottom should be clear yellow or white, and the rich coloured stripes which are the principal ornaments of a fine tulip, should be regular, bold, and distinct on the margin, and terminate in fine broken points, elegantly feathered or pencilled. The centre of each petal should contain one or more bold blotches or stripes, intermixed with small portions of the original colours, abruptly broken into many irregular obtuse points. It is the opinion of some florists that the central stripes or blotches do not add to the beauty or elegance of the tulip, unless confined to a narrow stripe exactly down the centre, and that they should be perfectly free from any remains of the original colour. Such flowers appear very beautiful and delicate, especially when they have a regular narrow feathering at the edge; but connoisseurs agree that it denotes the greatest merit, where the tulip abounds with rich colouring, distributed in a distinct and regular manner throughout the flower, except at the bottom of the cup, where it should be a clear bright white or yellow, free from stain or tinge.

Florists' tulips are generally divided into four tribes:—

First, *Bezarres*, which have yellow grounds, shaded with dark red or purple, and which are subdivided into flamed, in which the red or purple is in a broad stripe or band, rising from the bottom of the petal and feathered, in which the dark colour forms a marginal edging to the petals, descending into them in various little delicate feathery veins.

Second, *Byblœmens*, having white grounds, shaded with violet or dark purple, and also subdivided into flamed and feathered.

Third, *Roses*, having white ground, shaded with rose colour or cherry red, and divided into flamed and feathered.

Fourth, *Selfs*, being either a pure white or yellow.

The Dutch have a kind they call *Incomparable verport*, a very finely-shaped flower, white and feathered with bright shining brown. All these kinds are said to be varieties of one species, *Tulipa Gesneriana*, a native of Italy.

THE PANSY.

THE pansy is a flower to which many names have been given by poets and by rustics, by florists and by lovers; some call it the variegated violet, the forget-me-not, butterfly violet, three-faces-under-a-hood, heartsease, &c.; Spencer calls it the *pawnce.*

> "Show me the ground with daffadowndillies
> And cowslips and kingcups and loved lilies,
> The pretty pawnce."

The pansy appears to belong to our earliest associations, for we behold it scattered over the fields of our native land, and frequently rearing its humble head amidst the gaudy flowers of the parterre. Mrs. Loudon, in her "Gardening for Ladies," has given a pleasing sketch of the history of the pansy, as a cultivated flower. It has long been a favourite in our gardens, but it is only within the last few years that it has entered as a florist's flower. It was, however, reserved for a young lady, aided by an industrious and intelligent gardener to show the world the extraordinary variations of which this flower is susceptible.

About the year 1810 or 1812, the present Lady Moncke, then Lady Mary Bennet, had a small flower garden entirely planted with heartseases in the garden of her father, the late Earl of Tankerville, at Walton-upon-Thames. The young lady naturally wished to get as many different sorts into her garden as possible, and, at her desire, the gardener, Mr. Richardson, raised as many new kinds as he could from seed. From this small beginning the present passion for heartseases took its rise. Mr. Richardson, astonished at the great variety and beauty of his seedlings, showed them to Mr. Lee, of the Hammersmith nursery. Mr. Lee instantly saw the advantage to be derived from the culture of the plant; other nurserymen followed his example; and in a few years the heartsease took its place as a florist's flower. The most splendid flowers grown for exhibition are generally hybrids, which possess in a great degree the qualities of both parents.

Thus, though almost every heartsease has sprung partly from the wild kind *(viola tricolor)*, its other parent may be traced by its general appearance. The very large, dark, purple, and yellow flowers are descended from viola grandiflora—a species with large yellowish flowers. Other large flowers, with dark purple upper petals, and the lower ones of a bluish tinge, are descended from viola amœna, and the offspring of viola lutea are nearly all yellow, strongly marked with very dark-branched lines. The hybrids, raised partly from viola altaica, are of a very pale yellow, and the petals have an undulated margin; those from viola rothomogensis, or viola hispeda, are of a pale blue, and those from viola tricolor are white, slightly veined with purple, and tinged with yellow at their base. In the offspring of continual crossings, some of the characteristics of the parent always remain.

It is rather singular that florists are not exactly agreed as to the general treatment of this flower—some considering it a plant that requires very little care, whilst others maintain that its culture requires much attention. There is a habit peculiar to this flower, which is, that it ripens its seed during the whole of its flowering season, and hence it bears flowers and ripe seeds at the same time during the whole of the summer. The soil best adapted for the pansy is rich loam, mixed with one-sixth of sand and one-sixth of vegetable mould, and for the convenience of the amateur, these soils may be purchased in small quantities from the nurserymen. Having fixed upon a suitable place in your garden, form the bed according to your fancy, make a trench about the width of your spade, and from eight to nine inches deep; fill the trench with stable-dung, thoroughly rotten, and tread it well down, so as to make a thick layer of some six or seven inches in thickness. Over this put some loam, a few inches thick, and in this the plants must be planted. If the plan be adopted of rearing the pansy in pots or boxes, care must be taken that they be well drained; for it should be borne in mind that though the pansy is very liable to be scorched by the excessive heat of the sun, and will require constant watering in hot weather, it is also very liable to be damped off by cold and wet in the winter. It has been ascertained by experience, that considerable benefit is derived from putting better soil immediately to the roots, for the plants seem immediately to increase in growth; on the contrary, where this plan has not been adopted, the plants do not appear to recover from the shock occasioned by their transplantations, and for a considerable time their growth appears to be suspended; it must, however, be observed, that the plants derive greater benefit if the manure be placed at some little distance from the roots, than if it be placed in immediate contact with them.

Some of the best varieties are propagated by cuttings taken off in the spring, which grow so rapidly as to flower the same summer or autumn. These cuttings should be taken from the points of the shoots, taking them off immediately below a joint, and they should be struck in pure white sand or charcoal; for when the cutting is put into the earth, it is very apt to damp off. The cuttings when made should not be watered, but should be covered with a bell-glass and shaded for several days, on account of the succulent nature of the stems, and the great evaporation from the leaves. In about six weeks, they will be in a condition to be planted out. If the ground at that time be dry, the better plan will be to wait for a rainy day, when the transplantation may be effected. The soil into which they are transplanted should be rich and light, and the situation more or less shaded, according to the season, protecting them from the too great influence of the sun, and from cold cutting winds.

Pansies are sometimes propagated by layers, in which case the branch should be only pegged down by a point, and not slit, on account of its tendency to damp off.

In regard to the seedlings of the pansy, their treatment is by no means of an easy character, for the pansy is very liable to lose the character which renders it distinct from other kinds. If a fine seedling should make its appearance, the owner should not wait for any particular season before he begins to propagate it, for fear it should be lost altogether, which, unfortunately, has often happened. We will only mention the variety Goliah, which was raised by Mr. Rogers, which, for size and magnificence, surpassed any sort yet known. But this variety was so difficult to cultivate, although every care was taken of it, that it perished after producing only one flower.

As soon as the roots of the seedlings are long enough, an endeavour should be made to strike a few of them, that everything may not be risked on a single plant; but as the cuttings cannot in such cases be numerous, they may be planted round the edge of a pot, and covered with a hand-glass. After the first week or two, the glass should be taken off occasionally, that the damp may be able to escape; for the young shoots are so full of juice when taken, that there is danger of their rotting if air be not allowed them: after a little while, gradual exposure to the sun will be of service to them.

CULTURE OF THE CAMELLIA.

The most successful and generally adopted method of propagating this beautiful family is by inoculating or grafting: by this means each variety is perpetuated. New varieties are only to be obtained from seeds, and as these seldom ripen in any quantity in this country, the propagation of new varieties, is consequently, a matter of some importance. As in most cases, it is from single flowering plants that seeds are to be expected, although sometimes the semi double flowers also produce them; the common single red is the most prolific in affording seed. Sometimes seedlings so obtained are used only for stocks whereon to work other rarer kinds. Stocks, however, are for the most part obtained by nurserymen from layers of the common single red, which they often plant out in pots for that purpose, or from plants or cuttings. Camellias are sometimes budded, but for the most part are either grafted or inarched, and in either case, the process of tonguing is dispensed with, as weakening the stock, and that mode termed side grafting is preferred. It may be observed that of all the stocks for this or any other purpose, those obtained from seeds are the best; but as the seeds are two years coming up, cultivators seldom wait. Sometimes the double camellias are obtained from cuttings; but this is a tedious and precarious method of increasing them.

The proper time for grafting or inarching camellias is the spring, when the plants have done flowering and beginning to grow.

The time that elapses before an union of the scion and stock completely takes place is various in different sorts, and more particularly in regard to the state of health and vigour in which the plants may be, as well as the favourableness of the season. Observation alone can dictate when the clay and bandage of matting should be removed; there is an evil in allowing either to remain on too long. Camellias will form an union when the branches are of considerable size, and very large plants may be speedily formed by inarching several whole plants upon one common stock. This process is very prevalent round London, and when the operation is perfectly performed, and the plant cultivated, specimens of large size may be expected; certainly a few large specimens of this plant, where there is convenience for keeping them, are better than a number of small ones, which take up the same room, and never can produce so pleasing an effect.

In Mrs. Loudon's "Gardening for Ladies," she says, "Camellias are now frequently grafted in a manner first practised in Belgium, but afterwards greatly improved in the nursery of M. Soulange Bodin, at Fromont, near Paris, and which has the advantage of producing flowering plants much sooner than by any other plan. This mode of grafting, which is called *graffe etouffee*, may be practised at any season, and on a stock of any age, from the cutting of a year old, to the long-established plant, provided it be healthy, and of sufficiently small size to be grown in a pot. There are two modes of performing this kind of grafting, the first which is called *la graffee etouffee en fente*, and which is a kind of cleft grafting. The head of the stock is cut off close to a leaf, which has a strong, healthy bud on its axil. The cut is made sloping upwards to the leaf; and on the preservation of this leaf and bud, a great part of the success of the operation depends. The stock is then split, in face of the leaf and bud, to a depth equal to two thirds of its thickness, and the scion, which has been previously cut with a sharp knife into the shape of a wedge, terminating in a narrow point, is inserted. The heart of the scion stock, and that of the scion, are united as closely as possible, and the two are tied firmly together; the wound in the scion where the head was cut off, being covered with pitch, to prevent the possibility of any moisture entering the wood, though no pitch is allowed to touch the point of partition between the scion and the stock, lest it should prevent the uniting of the bark. As soon as the operation is finished, the pots containing the stock must be plunged into a bed of tan, lukewarm if it be in the spring, and hot if it be in the winter, and covered over closely with a mat or hand-glass. The glasses ought to be taken off every second day and wiped, as too much humidity will make the young plants damp off, and the glasses may even be left off for an hour or two occasionally. If the plants appear too moist, the second mode of performing this kind of grafting, and which is that generally practised in autumn in Belgium, is called *la graffe etouffee en placage ;* or *la graffe des Belges*, and is a kind of side grafting, or rather of inarching. It consists of cutting off the head of the stock, or the end of one of the branches, in a slanting direction, leaving a leaf and a bud above the cut on the higher side, and then cutting the scion into a slanting shape, so as to fit the wound in the stock exactly, and binding the two closely together with a strip of baste matting, but without using any other covering. As soon as the operation is finished, the pot is laid horizontally on a bed of dry tan, or on a bed of dry moss, the branches lying on the surface, and the pot being half buried in the tan or moss; the grafted part being covered with a bell-glass, stuffed round the bottom with the moss or tan, so as to prevent a particle of air from entering. This close covering is kept on for a fortnight, three weeks, or a month, according to the season; at the end of which time, the graft will be found perfectly united to the stock. Air is then admitted to the graft by degrees, by first lessening and then removing the moss from the glass. The glass is afterwards taken off, and the pots set erect.

The great points to be attended to in this mode of grafting are, giving the plants bottom heat, and covering them closely, whence the name of *graffe etouffee*, as the plants appear almost stifled for want of air. According to both modes, as soon as the graft has taken, the leaf and bud of the stock, above the insertion of the scion, which were left on to draw up the sap, are cut off, and the plant is then in a fit state to be removed to the greenhouse, or any other place where it is to flower.

The camellia is a plant that requires to be well supplied with water, and yet it cannot endure stagnant moisture about its roots: this will soon prove the death of the plant. When the plant is grown in pots, the drainage should be abundant, that is, the pots should be nearly a quarter filled with pot sherds or gravel. The most preferable soil for the camellia is peat earth and sand, in which a small portion of vegetable mould and charcoal may be mixed; that is, if it be desired to possess plants of a very luxuriant growth. It is advisable to pot the plants high, so as to permit the collar of the plant to be completely above the rim of the pot. It is bad practice to allow saucers to the pots, and this rule should be observed not only with camellias, but all other plants. It is true that watering plants in rooms without saucers is the cause of considerable damage to the furniture, but the plan ought to be invariably adopted, where saucers are used, to empty them of the water as soon as it has drained through the mould. Particular care should be taken to give a copious supply of water to the plants every day, during the time that the buds are swelling; and if this process be neglected, considerable risk is run of the buds dropping off. The watering may in some degree be dispensed with, when the flowers begin to expand, but not wholly so, but only supplied in a more moderate quantity. On the other hand, when the plants are throwing out their young shoots, recourse should be had again to a copious supply of water; when they have ceased to grow, it will then be necessary merely to water them once or twice a week, until the flower buds again begin to swell. It would be advisable during the time that the plants are growing, to set them out in the air, and the leaves syringed all over two or three times a week. Particular care, however, should be taken not to follow this practice during the time the sun is on them, or, at all events, not to place the plants in the sun whilst they are wet, as the rays of the sun acting on the water will act as a lens, and actually wither up the leaves. It must be particularly observed that the roots of the camellias are in general rather weak, and, consequently, are easily injured; at the time, therefore, when the plants are repotted, the most particular care should be taken, not to bruise the roots, and to deprive them of all those that are in any way injured. If previously to repotting, on turning out the plants, no white roots should appear on the outside of the ball of earth, the earth and decayed roots should be shaken, or cleared away, till the good roots be seen, when a careful examination should be taken of them, and all the bad parts cut away. The plants should then be repotted, in pots not exceeding by more than an inch the diameter of the ball of the earth left, and round the sound roots; and they should be well drained at the bottom with very small potsherds or clean gravel.

Small camellias should not be shiffted oftener than once in two years, and large ones, that is, those above two feet high, not oftener than once in three or four years; but if the earth in the pot appears to have sunk, a little vegetable mould may be laid on the surface. The usual time for shifting camellias is just when they have done flowering, before they are beginning to send out their young shoots. When planted in the free ground in a conservatory, they will not require any other care than regular watering, and syringing the leaves once or twice a week. When planted in the open air, the roots should be carefully protected by straw during frosty weather. The hardiest kinds, and the most suitable for planting in the open air, are the single red, the double red, and the double white. The tenderest of the common kinds are the beautiful apple-flowered variety *(camellia sasangua)*, and the single variety of this species, the flower of which resembles that of the tea-plant. Camellias are very often infested with insects, particularly a kind of black aphis; the only remedies for which are fumigation and constant syringing. The leaves of camellias should be always syringed on the under side, as well as on the surface, as they curve inwards a little, and thus afford a shelter to insects, from which it is very difficult to dislodge them.

GENERAL CULTURE OF BULBOUS AND TUBEROUS ROOTS.

The general culture of bulbous and tuberous roots is to take them up annually, soon after they have flowered, when their leaves and stalks turn yellow and decay, then the root is at rest, and its fibres die. When first taken up, lay them covered on dry ground for a few days, and then clean and harden them in the sun, if not exceedingly hot; when they must be stored in a dry place, till wanted. Damp is apt to rot them. Never put many together, or into earthern vessels for keeping them, lest they mould and sicken.

It is not absolutely necessary to take bulbs and tubers up every year, as every second or third year may do, but it is the common practice of gardeners to do so, because it gives an opportunity to remove the offsets for propagation, and the mother bulbs are thus strengthened, as also from the renewed soil they meet with by a fresh plantation. Some people suffer bulbous roots to remain many years without taking up, but then they cramp and starve one another, and are apt to go off from their original beauty.

Bulbs and tubers may be either re-planted immediately on being taken up, or kept out of ground during their natural period of rest, or for some sorts even longer, as anemones and ranunculuses for several months. Autumn flowering bulbs are to be taken up in May, if their leaves be decayed.

Spring flowering bulbs should be replanted in September or October; those of the summer, in October or November; and those of the autumn in July or August. A little before or after is of no consequence, only when they are put in too soon, the spring ones come on so forward as to be liable to be damaged in severe winters and springs; and when kept out of the ground too long, the bulbs spend themselves first in making roots. The scaly bulbs, or lilies, should not be kept out of the ground above a month or six weeks; those that flower in summer may be put in the ground at different times, as early and late in autumn, and early in the new year, not later than February, in order to obtain a succession of blooms. If any be put in at the end of February, or beginning of March, they should remain two years for increase. This is a common practice with the anemone and ranunculus; but when planted in winter, the soil should be a dry one, or made so, by digging in a good quantity of fine sea-coal ashes and course or drift sand, otherwise they are apt to rot, if much wet falls, before they have started fibres, especially when followed by sharp frost. They may be protected from wet by mats, and from frost by peas haulm, or wheat straw.

Offsets of bulbs and weak tubers must be planted a month before the full-sized roots, and as they are not expected to flower the first year, should be disposed of in nursery beds (rather close), where they may grow a year or two, according to their strength, as some will be this time or longer before they flower. Those taken from scaly bulbs, will not endure to be out of ground, and must, therefore, be planted almost immediately. Bulbs taken up out of season, that is, when they remain so long in the ground as to have struck out fresh roots, should be removed with balls of earth, for though they may live without this care, they will be exceedingly weak; it is, therefore, necessary exactly to observe the proper season for removal.

The soil that best suits bulbous and tuberous roots in general is a sandy loam, but most of the sorts are not very fastidious as to the nature of the soil in which they are planted. The ground for them, however, should be well dug, even two spades deep, in order that their fibres may shoot freely, and the wet be completely drained from them when much of it falls. This work should be done a week before planting, in order that the ground may settle. In a light soil, roots of the ranunculus have been found to strike a yard deep, which may serve as an admonition, that in clay bottoms it is proper to place a layer of stones there, say eighteen inches, so that too much moisture may not be detained to sicken the roots.

The depth at which bulbs should be planted, must be according to their size, three or four inches deep from their top, tubers also according to their size; anemones and ranunculuses at two, or two and a half inches, &c Some bulbs will come up even when a foot below the ground, as crown imperials; and crocuses at six inches or more; some persons, therefore, plant them deeper than the above rule, in order to be able to stir the surface of the ground without damaging them; but it is not advisable.

In beds, the fancy sorts of bulbs and tubers may be set in rows, eight or nine inches asunder, and from five to seven inches in the rows, according to their size; the distance, however, of four inches apart is by some florists thought sufficient for anemones and ranunculuses, but certainly a greater distance were better, where a strong bloom is the chief object. Hyacinths should be planted at seven or eight, although they are more commonly set at six inches; tulips should be at eight or nine, although six is often all that is allowed them.

When planted, if rain does not come in about four days, beds of bulbs and tubers should be watered to set them growing, that they may not mould and rot.

Though bulbs may be planted by a dibble, taking care that the earth does not lie hollow about the roots, a better way is to draw drills and place them in, giving them a gentle pressure into the ground, and covering neatly up; a little free sand may be strown along the bottom of the drills under hyacinths, anemones, and ranunculuses, if the soil be not a dry and light one. The best way of planting bulbs is, however, to draw the mould off the bed to a sufficient depth, then lay the surface perfectly level, give a watering, and when the top is a little dry, mark it out into proper sized squares, then place a bulb in the middle of each, and carefully cover up, so as not to throw them on their sides; give the whole a little pressure with the back of a spade, in order to fasten the mould.

Bulbs and tubers, in beds, may conveniently be protected, when in flower, from rain and sun by an awning, which will continue them in bloom much longer than if always exposed; when these flowers, in beds, first break ground, if the weather be severe, they may then have an awning of mats or cloth occasionally over them, or a little peas haulm or wheat straw laid thinly on, just to protect them in their tender state a little; this applies particularly to the nights, for during the day a cover should not remain on in tolerable weather; but before the shoots appear above ground, valuable beds of these flowers should be sheltered from having much wet, even during the whole of the winter; as moisture imparts so much power to frost, if a body of snow lies on it, it should not be suffered to melt there when it thaws.

Although bulbous flowers are propagated plentifully by root offsets yet some are increased from little bulbs formed on the sides or tops of the stalks, as the moly tribe and the bulbiferous lily. These should be taken off in August, dried a little in the sun, and then planted in nursery beds as offsets.

Bulbs propagated from offsets produce a flower exactly like the parent, and varieties are only to be obtained from seed, which do not always, and, indeed, seldom produce flowers like the original the seed came from.

Let seed be saved only from choice flowers, be thoroughly ripe, and being hardened a little in the sun, may be sown after in pots, or boxes of light earth, about the middle of August or September, and setting them in a sunny sheltered place, not under cover. Sow anemones and ranunculuses a quarter of an inch deep; irises, colchicums and cyclamens, half an inch, and frittillarias and hyacinths nearly an inch deep, giving water in a dry time, so as to keep the mould somewhat moist, but not wet.

An observation may be made here that the same bulb, as often thought, does not always continue, but some are renewed every year, as the tulip, which is commonly esteemed the old one, is, in fact, a new formed one, though, perhaps, not less in size, and, indeed, it may be larger.

SMYRNA MARROWS.—This kind much resembles the dwarf white marrows, but is of taller and much stronger growth, branching, with short joints. Petioles long, and the tendrils large. Peduncles rather long, and the blossoms very large. Pods large, broad, and well filled. An excellent bearer, of good quality, and comes into use a few days after the branching marrow. Seed very large, white.

THE APIARIAN'S MONTHLY GUIDE FOR JANUARY.

THE bees will be found more or less active this month, according to the openness of the season. Should the bees be seen on a fine day flying abroad in great numbers, and making a humming noise, you may rest assured that your hives are in good health, and the less they are molested the better. At all events, should any accident occur which renders it necessary to inspect the inside of the hive, be sure and choose a fine dry day for the purpose, for humidity destroys more hives than cold.

Be particular in brushing off the snow from the hives; never allow it to dissolve upon them, for it will penetrate to the interior and spoil the combs, and the bees will forsake the hive.

An oppotunity must be taken of a fine day to inspect the hives, and in those cases where the bees are in the common hive, it should be turned up, and the stool well cleaned. A renovation of air in the interior of the hive will be of great benefit to the bees, for as there is no evaporator in the common hive as there is in the Huish hive, the foul air which has been gathering during the winter has not been able to find a vent, and becomes at last highly prejudicial to the bees; were the hives to remain an hour turned up, and the bees wholly exposed, it would rather be an advantage than an injury. We are inclined to believe that the dysentery amongst bees is caused more by the respiration of the foul air generated during the winter, than from any other cause, although it be certain that it can be brought on by unwholesome and infected food.

The state of health of the bees can in some degree be ascertained by the symptoms of anger which they display on lifting up the hive. If a rustling noise be heard amongst them, and a sudden jerking of the wings as if attempting to fly, it may be concluded that the community are in good health. The odour which issues from the hive immediately on raising it, is also a criterion by which to judge of the health of the bees. It is, however, difficult to describe the distinctive qualities of this odour, and the only sure method for the inexperienced apiarian is to draw the comparison between the odour of a diseased hive, and that of a sound one. That of a diseased hive partakes strongly of the smell of putrified objects, but not of an animal nature,—that of a sound hive resembles the smell of heated wax, partaking at the same time of the fragrance of honey. But one of the surest criteria to discover the healthy state of the bees, is to catch two or three and to kill them; if the substance in the stomach of the bee be of a yellowish colour, divested of a fœtid smell, but partaking of that of honey, the bee may be considered, as far as the dysentery goes, to be in good health,—but if the substance be blackish, accompanied with a putrid smell, the bee is evidently in a diseased state. If, further, some blackish spots, resembling small linseed, be perceptible on the stool, in a state of desiccation, it may then be considered as certain that the bees are in an unwholsome state. No time should then be lost in administering to them some food in which an extra quantity of salt has been mixed, with a glass of port wine, but should that not be within the reach of the cottager, some diluted brandy will be equally efficacious, and a little salt may be sprinkled amongst the bees; this malady of the bees arises frequently from the honey being deposited in old and infected combs, which turning acid, occasions that disorder in the digestive organs, which ends at last in the dysentery. Another cause is the old and musty bee-bread which is the usual concomitant of old combs. Nature has, indeed, wisely taught the bee to provide against the bad effects of putrid bee-bread, by the particular art which it displays in filling a cell only half full of bee-bread, and the other half with honey—thus in some degree providing against an admission of air to the bee-bread; but the honey itself becomes in time contaminated with the deleterious nature of the bee-bread long kept in the cells, and unless due vigilance be used on the part of the apiarian the destruction of his hives will be the result. It is very difficult to prescribe any method by which the combs can be removed in the common hive, and by which it would be divested of the infectious bee-bread; how is a person, not over-skilled in the operative departments of the science, and perhaps not skilled at all, to penetrate to the top of a common hive, to divest it of a piece of infected comb—how is he to ascertain in what particular part of the hive the infected combs actually exist, and perhaps after having cut out one comb, he may find himself in the situation of the dentist who, through ignorance, has extracted the sound tooth for the unsound one.—Thus, the common hive presents those insuperable difficulties to the proper management of bees, that we are not so much surprised at the smallness of the success which the cottagers have in this, to them, most interesting branch of profit; but our surprise is great that they have any success at all.—They cannot be supposed to possess an intuitive knowledge of the niceties of the science, and all the skill which they do possess appears to have been inherited from their grandmothers and great-grandmothers, who wisely concluded, that if they placed their hives in a garden, they had nothing more to do than to watch their swarms, and then to suffocate them; and should any disaster befall their hives—their want of management and skill was the last thing which entered their heads—some cause must, however, be ascribed for the failure, and it generally turns out that either the son or daughter has seen a witch riding through the air on a broomstick, and, therefore, the bees have certainly been killed by the indignant Hecate.

How different is the method of management in the Huish hive; the infected combs may be examined and extracted, every part of the hive may be most minutely inspected, every comb may be taken out, the old ones rejected, and the sound ones replaced in their original position.

Delay not every morning to brush off the snow from the hives, which may have fallen during the night. Cottagers in general entertain the idea that snow keeps their hives warm;—supposing even this to be the case, it would be no benefit to them, but the injury sustained by a hive, from the snow melting on it, is irreparable.

A Hint to the Growers of the Maple Tree.—At an average, the full-grown maple tree will yield about five pounds of sugar at each tapping; and, if carefully treated, will last forty years.

Some of the broad-tailed Caramanian sheep run nearly three feet at the shoulders, and weigh from 100 to 130 lbs. Their fleeces are abundant, producing five or more pounds of coarse wool.

Cheap and Efficacious Manure.—Raise a platform of earth on the headland of a field, eight feet wide, one foot high, and of any length, according to the quantity wanted. On the first stratum of earth lay a thin stratum of lime, fresh from the kiln; slake this with salt brine, from the rose of a watering-pot; add immediately another layer of earth, then lime and brine, as before, carrying it to any convenient height. In a week it should be turned over, carefully broken, and mixed, so that the mass be thoroughly incorporated. This compost has been used in Ireland, and has doubled the crops of potatoes and cabbages, and it is said to be far superior to stable dung.

To Hasten the Blooming of Flowers.—Sulphate or nitrate of ammonia, eight ounces; nitrate of potash, four ounces; sugar, two ounces; hot water, one quart. Dissolve, and keep in a well-corked bottle. About eight drops are to be placed in the water of a hyacinth-glass, for bulbous-rooted plants, changing the water every few days: add a few drops to the water employed in moistening flowering plants in pots. The preference should be given to rain-water for this purpose.

A Substitute for Bones and Guano.—Let the farmers and gardeners only know and appreciate the value of human urine. This refuse only requires to be preserved in tanks, &c., and before it becomes ammoniacal to have fourteen pounds of Epsom salts (sulphate of magnesia) dissolved in every hundred gallons, in which state it is chemically identical with guano, with a slight excess of magnesian sulphate intentionally supplied, then to have as much lime (slacked the day before) thrown into it as will bring it to a manageable state. By treading it down in tanks, barrels, &c., according to quantity, it may be preserved for any length of time.

To Raise Large Crops of Potatoes of the Best Quality.—Take middle-sized roots, and soak them during eight or twelve hours, if very dry, in water, or draining of a dung-heap, or water in which horse-dung has been steeped some days, or in water well saturated with saltpetre or common salt, a saline steep being the supposed preventive of the curl, which it may be, the disease being in the seed, although certainly not, should the curl originate in any future cause. The land being well broken up, pulverised, and cleaned, mark it out in rows eighteen or twenty inches apart. Make each row into a trench, as for celery, and each trench nine inches deep and twelve wide, the earth removed to form the trenches to be thrown on each side of them. The bottom of the trench should be level, and the potatoes planted in it four or five inches deep and twelve inches apart. The manure is then placed upon them in the trenches, and the ridges of earth upon that, leaving the surface level. Some growers defer moving the earth off the ridge until the plants have reached the height of six inches, then gradually throwing the earth upon them; but, in the meantime, the solar heat may be exhausting the quality of the manure, and, moreover, a covering of earth will add warmth to the seed, and accelerate its growth.

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FEBRUARY.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

THE FLOWER GARDEN.

FIRST WEEK.

AURICULAS. — If the weather be frosty, covering at night must not be neglected; but during the day, while the weather is bright, the covering must be removed to give light to the plants. Should a fall of snow take place allow it to remain on the glasses, and so long as the frost continues do not remove it. A better covering for these plants cannot be had at this season, and if five inches deep, it will be sufficient protection. In the year 1814 our frames were covered with snow for upwards of ten weeks, from eight to twelve inches deep, there being no other covering on the glasses, the plants received sufficient light through the snow, and at the break of this long frost, bore as healthy appearance as ever we could wish; and that season produced superior blossoms than usual both in size and colour.

DAHLIAS.—We do not recommend amateurs to commence working their dahlias at present; there is plenty of time yet. They will find great difficulty in contending against strong northernly and easterly winds, working on a small scale. As we have before advised, work over the roots, and trim off the old fibres, and cut away decaying parts from the tubers. If the roots are shrivelling spread them on the shelves, and throw a little damp soil over them; this will tend to swell them a little.

CARNATIONS AND PICOTEES.—Give these plants all the air and light you can. So long as the atmosphere is not frosty, and it is dry overhead, the glasses should be drawn off, except when strong easterly or northernly winds are blowing, as before observed. Look them over, and water such as are getting dry; but give it sparingly at present. Clean them of decaying foliage, and remove sickly plants to a place by themselves. If a fall of snow takes place, allow it to remain on the glass till the frost breaks up; you cannot have a better covering.

AURICULA AND POLYANTHUS SEED.—Auricula and Polyanthus seed may be sown any time this month. The seed may be sown in a warm spot, or in boxes or large pots filled with light rich earth; but the pots or boxes are often preferred, because they can be readily removed to different situations, as the season may require. The seeds must be sown tolerably thick, and covered with light earth, about a quarter of an inch deep. Place the boxes in a situation well defended from northernly winds, and open to the morning and midday sun; in two months, or ten weeks' time, they must be removed to a more shady place.

ALPINE AND OTHER RARE PLANTS IN POTS.—At this season many of the alpine and other rare plants in pots will now begin to show evident signs of vegetation. It is necessary, therefore, to examine them carefully, and if any shall have died, fill up the vacancies. Those which it is desirable to propagate should now be taken out of their pots, divided into pieces, according to their several habits, and re-potted; and others that may have increased beyond the intended limits of the collection should be planted out, partly on the rock, or in favourable situations in the flower borders, keeping only a specimen or two of each in pots, unless it be those which are very minute and liable to be lost, or too rare to be yet trusted out either in the general collection or in the borders. Many alpine plants of great beauty are only annuals, therefore, such should be attended to, and the pots in which they grow left undisturbed, as in a short time it is very probable that a stock of young ones will arise out of them, which is particularly the case with the families *cochlearia*, *illecebrum*, *droba*, &c. Many other families, of which it is necessary to keep duplicates in pots, such as *dianthus*, and some others require to be propagated annually, either by cuttings or seeds. With such exceptions, the remainder should be annually repotted and divided, and no season so proper as the present.

Honeysuckles, Roses, &c. — Where roses, honeysuckles, or other flowering shrubs in borders are wanting, let them be now brought in. Care must be taken in planting them, or they will make but a poor appearance in the succeeding summer. The ground must be opened to a due depth, and a quantity of well wrought mould left under the roots. The hole must be considerably larger than the roots can fill, and when the shrub is set upright, a firm stake must be driven in near it, and the opening filled in carefully with well-broken mould. The stem is then to be tied up to the stake, and too much head must not be left. If the weather be open, and not inclined to frost, a gentle watering must be given as soon as the shrub is planted, and repeated every other morning, and the ground round the stem must be slightly mulched.

Pruning Hardy Shrubs.—Any time this month, when very severe frosts are no longer to be apprehended, that would much injure hardy shrubs, they may be pruned of all dead branches, and of the points of such shoots as have been damaged by the severity of the winter. Roses, and several other kinds that grow bushy, may be thinned out a little in the centre, and the stronger and middling shoots of roses should be more or less shortened, in order to cause them to push shoots and flowers more freely. Several others require the like management, which need not here be particularised; but most shrubs require nothing further than to be pruned of injured shoots, straggling branches, or of suckers that rise round the stem. They should not be trimmed up in a formal manner, as was he custom when Dutch gardening was in fashion; the more natural the outline of the plant the better. In short, the pruning of deciduous hardy shrubs should be done in such a manner as not to appear after the plants are again in leaf. Evergreens, and the more tender kinds that are apt to be much hurt in severe winters, sometimes require to be so pruned, as that it cannot possibly be concealed, which is a great misfortune, and much disfigures these delightful plants. In order that they may not be pruned unnecessarily, or that the pruning may have to be repeated, it is advisable to delay that work till the end of March or the beginning of April.

Tulips, Hyacinths, &c.—Defend the beds of the more curious tulips, hyacinths, anemones, and ranunculuses from frost, snow, and excessive rains. The plants will now begin soon to appear above ground, and the beds should be arched over with hoops, and in frosty or extremely bad weather, let mats or canvas be drawn over to defend the advancing flower buds.

Planting Flowering Shrubs.—Most sorts of flowering shrubs may be safely removed at any time this month when the weather is open, particularly the garden rose, syringas, laburnums, lilacs, honeysuckles, roses, spiræas, and Althea frutex, Hypericum frutex, Persian lilac, double blossomed cherry, double bramble, cornelian cherry, and double hawthorn. You may likewise plant bladder sena, scorpion sena, privet, Spanish broom, jasmines, sumach, cistuses, and acacias, and many other sorts of hardy deciduous shrubs, for most sorts will take root freely at this season.

Planting Hardy Herbaceous Fibrous-rooted Flowering Perennials.—Now you may plant where wanted most sorts of hardy, fibrous-rooted plants, both of perennials and biennials, if the weather be mild and open. Such as polyanthuses, primsoses, London pride, violets, double daises, double camomile, thrift, gentianella, hepaticas and saxifrage. In planting the above, or any other sorts, observe to dispose them regularly, and intermix the different kind in such order as there may be a variety of colours as well as a regular succession of flowers.

Cleaning Plants from Insects. — All plants should now be revised for the purpose of cleaning them from the dirt collected during winter and also from insects. This operation may be performed any time in the course of this month; the best way is to do this individually and not collectively, as it is often superficially done to very little purpose. It is certainly better to clear the plants completely at once, though it should cost a day's work or two, than to be always cleaning, and still never to be clear from insects of one kind or other. Those plants which the coccus or scally insect chiefly annoys, as myrtles, oranges, olives, and other hard, smooth-leaved kinds, should be carefully washed, stem, branch and leaf, with soap and soft water, using a bit of woollen rag tied on a small stick and observing to wash or rub well into every angle of the stem and branches. If any of the plants have been trained to sticks or poles, these should be either completely washed as above, or be newly painted; and in dressing the plants to them again, observe to tie with fresh worsted or matting, for the eggs and larvæ of the insects are as apt to be lodged in these as on the foliage or branches. Every plant which has been gone over with the soap-suds should be well syringed with pure water, or otherwise be washed quite clean, in order to prevent the accumulation of dirt on the leaves, which would else be encouraged on account of the glutinous nature of the soap. Other plants of softer, downy foliage, as geraniums, ononis, phlomis, &c., are subject to the attacks of the green fly; such should therefore, if affected by that insect, be placed in a hotbed frame in a compact manner, where let them be fumigated for half an hour, with tobacco. The frame should be well matted up, or be covered with an oil cloth, in order to prevent the smoke from escaping as much as possible: after the plants have remained there an hour, they should be well syringed to clean them of dust collected in winter, and of the dead insects. Then shake them well, in order to prevent the water from lodging in their leaves, and to prevent the bad effects of damp, which otherwise might hurt them at this early period. On replacing the plants on the stages observe to place their worst or misshapen sides towards the sun, that they may be drawn into a proper form again.

Bulbous Flowers in Pots.—Hyacinths polyanthuses, and narcisuses, will require regular and free supplies of water, more especially those furthest advanced and coming into flower; such as are in glasses should have the water changed once in four or five days, or perhaps only once a week, which must be regulated according to the state of their growth, never allowing, however, their fibres to knot or cluster, which they always do, if the water be not regularly changed.

SECOND WEEK.

Auriculas.—If the weather continues open, these plants should now be top-dressed; many will require shifting into larger sized pots; such as have fitted their pots with roots, and are likely to produce good trusses, should be attended to. In performing this operation, care should be taken not to break the ball. First remove a small portion of the soil from the surface, then passing your fingers under the foliage of the plant, invert the pot on your left hand, and gently tap the rim on your potting board; when disengaged, remove it, and take away as many of the pieces of potsherds as you can without disturbing the roots; this done, carefully place the plant in the centre of the pot intended to receive it, and fill up with the compost. In earthing up the larger plants, remove a little of the surface of the soil; but as soon as you discover the fibres, desist, for fear of injuring them; and while the stem of the plant is exposed, take off all the offsets that have any stem formed, with and without roots. It is much the better way to break the offsets out of the stem, by pressing them downwards, than to cut them off with a knife; for when you break them out, they will bring away all that belongs to them, but when taken off with a knife, a portion is left on the old stem, which portion is sure to decay, and in too many cases the plant decays with it, particularly if not attended to. Fill the holes occasioned by the removal of offsets with pounded charcoal, and earth the plants up to the shoulder of the foliage. The rooted offsets may be potted separately, or round the sides of pots, as may be most convenient, and placed in a close frame till they are established. Those without fibres, if treated as follows, will root freely, and make better plants than if left on the old plants till May. Plant them round the sides of a pot or pots, six or more in each, plunge the pots in a south border up to their rims, and cover them down close with hand or carnation glasses, so that slugs cannot enter; they will not require shading by day, or covering by night. Occasionally look over them, and see that the soil is moderately moist.

Tulips are now generally making their appearance through the soil, and will require protection; if you have not the ordinary means of covering, viz. (hoops and mats) put a little dry soil over the spear of those that are most valuable or tender; this will protect them without injuring the foliage.

Auriculas from Seed.—Fill the boxes or pot with fine, sifted, middling compost, smooth the top perfectly level, scatter the seed evenly, and cover not more than the thickness of a shilling. Let the pots be on tiles or boards, under a warm wall, and keep the surface moist. It is a good practice to mix the seed with a like quantity, or a little more, of pine-wood ashes, and to lay some small pieces of furze or light thorns over them. Remove them according to the weather, to shelter or protect them from cutting winds, much frost, or heavy rains, &c., and by May expect them to appear, when take the furze off and cover it with a net; let them have only the morning sun, keep them moist, and when they have got six leaves, prick them out three inches asunder, in boxes or pots, and early in the following spring plant them out, six inches asunder, and protect from wet and frost.

Hardy Perennials.—About this time may be planted many hardy perennial flowers, either in patches about the borders or in beds by themselves, such as American cowslip, asters (many species), auriculas, campanulas, carnations, cranesbills, daisies, dog's-tooth violet, double violets, double catchflies, garden valerian, gentionella, Greek valerian, blue and white hepatica, lily of the valley, London pride, peony rose, pink, polyanthuses, primroses, ranunculuses, or bachelor's buttons, rockets, rose campion, saxifrage, the large double red and white scarlet lychnis, stocks (many sorts), veronicas, wallflowers, single, double, and bloody, and many others.

Hardy Annuals.—About the middle or latter end of this month, if the weather be mild and open, many sorts of the hardy annual flower seeds may be sown. The proper sorts of which are, larkspur and flos Adonis, convolvulus, lupins, scarlet pea, sweet-scented and Faugier peas, candytuft, dwarf lychnis, Venus's looking-glass, Lobel's catchfly, Venus's navelwort, dwarf poppy, nigella, annual sunflower, oriental mallow, Lavatera, and hawkweed, and many other sorts. All the above seeds must be sown in places where it is intended the plants shall flower; they must not be transplanted, for these sorts will not succeed so well by that practice. Auriculas, polyanthuses, sweet-williams, stocks, and wallflowers, may be sown for transplanting.

Blowing Annuals early in a Hothouse.—Any sorts of desirable annuals of moderate growth may be flowered early in a hothouse with a little trouble, sowing the seeds in pots, and placing them in any part of the house, or towards the end or front glasses, or, in order to have them as forward as possible, some may be plunged into the bark bed.

Tender Annuals in Hotbeds.—This is the time for sowing tender annuals upon hotbeds. It is a matter of great importance, for the beauty of the autumn depends upon it, the putting in the seed thus early for the crop of the succeeding year, for by bringing the plants forward in good time, it gives them an opportunity to ripen their seeds. A greater degree of trouble is not required to bring them forward thus early, than is taken by those who raise them later. The hotbed prepared for these is covered from four inches and a half, with rich garden mould, and it is just in a condition to receive the seeds. This thickness of mould is greater than florists generally use, but it is a very essential article for the success of the growth, seedlings shoot deeper than is commonly thought, and every fibre then that reaches the dung perishes, not like one that is cut off, which sends out more, but never to vegetate again. Let the mould be perfectly levelled, and as much drawn off as will serve to cover the seed; then let the seed be scattered carefully upon the surface, and sift over them a quarter of an inch of the mould raked off for that purpose; the seed of the gomphrena, amaranth, balsam, French and African marygold, china-aster, and the rest are to be sown in this manner. They will shoot in twelve, fourteen, or more days, according to their several kinds, the condition of the bed, and the newness of the seed.

Anemones and Ranunculuses.—Anemones and ranunculuses, and other choice flowers, must be still defended by drawing mats over them, supported by hoops, in the severe nights, but they must be carefully hardened to the free air in the middle of good days.

Borders for Flowering Plants.—Now prepare borders for sowing flowering plants in the open ground. Let two or three pieces in different parts be dug up, and the mould thrown in ridges east and west, to receive the benefit of the air. Whilst this soil is mellowing, let another piece be dug up for the immediate reception of hardy shrubs. Such as were not rooted sufficiently in autumn may be taken off now, and planted about two feet distance.

Carnations and Pinks.—In mild weather transplant those carnation plants which have been last year propagated from layers into beds in the flower garden, or into pots to be afterwards shifted into larger ones as they advance, in the latter of which they should be left to flower, or they may be planted out singly or in patches of three plants in each patch, promiscuously through the flower garden, or edges of the shrubbery. If potted for flowering, choose for the purpose some light rich compost, or one may be made for the express purpose, consisting of good pasture earth, pond mud, old cow-dung, and a little soot. Take them up with as much earth as will hang about their roots, and place one in the middle of each pot, spreading the roots, without bending or confining them. Snip off their ends with a pair of sharp scissors, and immediately pour in the mould a little at a time; pay particular care that it gets in amongst the roots, and when they are covered up to the bases of their leaves, give a little water. Set them in a place open to the south-east, and defended from the north winds. They are to stand thus two months; once in four days they should be watered, and now and then the surface of the mould stirred about them.

Planting Edgings.—Box for edgings to borders, &c., may be planted any time this month, likewise where there are gaps in former planted edgings, let the deficiencies be made good, also over-grown or irregular edgings replanted. Thrift makes a very complete edging, if planted properly, and well kept. This may be planted any time this month, either in a close edging in the manner directed for box, or planted with a dibble, setting the plants about two or three inches asunder, and give it two or three good waterings in dry weather. Double daisies make also tolerably good edgings, and may be employed in default of the two former, or to effect variety. Let them be planted nearly close, or not more than two or three inches distant in the row. There is nothing, however, makes so neat, effectual, and durable an edging as box. All edgings should be kept neat and regular, by trimming them at sides and top every spring and summer.

THIRD WEEK.

PINKS.—Go over the beds with the hoe, and move the surface of the soil; examine the plants, and if any are loosened by the frost, press the soil to them and fix them. The number-sticks will also require looking to, as the frost lifts them out of the ground, and if allowed to fall, the worms draw them away, and thus throw you into confusion. These plants suffer more during the month of May than at any other season of the year. The easternly winds destroy the foliage to a great extent, and, therefore, provision should be made for protecting scarce, delicate, and valuable kinds. We have lately seen a neat and durable article manufactured for this purpose by the poor of Isleworth. They are constructed of deal wood, in the form of a beehive, with three prongs to fix them in the ground, a kind of basket-work, sufficiently to admit light and air to the plants, without having any tendency to draw them, and are alike applicable for shading the blooms of pansies, verbenas, or other low growing flowers (intended for exhibition) from the powerful rays of the sun. We are not at present in possession of the price of these useful shades, but are credibly informed it will be very moderate; if so, they will soon find their way into every amateur's garden.

CARNATIONS AND PICOTEES.—These plants may now be allowed to receive moderate showers; it will be of more service to them than a continuance of watering. Cleanliness is a most important part of the culture of these flowers; they must be kept clear of weeds, and decayed foliage, and while performing the latter, if the surface of the soil be stirred it will also prove beneficial.

TULIPS.—The tulips will now be projecting from the ground, and should have all the air which can be given to them, provided they be well secured from frost. If, however, the weather be open, they should be covered at night, for although there may be no frosts as the night sets in, yet it may come on severely during the night, and owing to misdirected confidence the plants may be greatly injured. Should the bed not be provided with a proper awning, a row of hoops may be placed, over which moss may be thrown, which will prevent the frost from penetrating and at the same time keep in the warmth which may have been imbibed from the atmosphere or exaled from the ground.

TENDER ANNUALS.—A slight hotbed should now be made for tender annuals, which should now be sown without any further delay. Supposing, however, that you have a garden frame at your convenience, make a square heap of dung, allowing it to extend about six inches farther than the size of the frame, and in height about three feet. The heap must be made as compact as possible by beating it down, when the frame may be put on, and being properly covered, the heat will rise in a few days, and the proper compost of good loam and manure may then be thrown upon it. In about a week, the bed will be in good order to receive the seeds. The tender annuals that were sown last month will now be fit to be removed into nursing pots. Select the strong plants, which should be taken up carefully out of the pots in which they have been sown, and planted out into small pots, one plant into each if of the size called small sixties, or three plants may be placed into each, if of the size called forty-eights, these to be afterwards transplanted into larger pots, as they advance in growth. In order to have these plants fine, it is necessary that they be grown rapidly, and great care must be taken that they do not receive a check in their growth, which would be apt to throw them into flower at a premature state, when their flowers would not be able to attain to so large a size, nor yet blow so fine. Throughout the whole culture of tender annuals, they should be prevented from being drawn up slender, which will be the case, if kept too far from the glass; for this purpose nothing is so well adapted for their reception, after their being once potted off, as a hot-bed frame of the ordinary dimensions, so that the plants may be allowed to enjoy plenty of light, and be near the glass, whilst their roots are plunged into mild bottom heat. Whilst in this bed they should be regularly supplied with water, often sprinkled over their leaves, and air admitted to them.

Transplanting Annuals sown in Autumn.—When the annuals that were sown in autumn have stood the winter, and are standing too close together, they should be thinned out to a sufficient distance apart, so as to allow each plant fully to develope itself; by this means a much greater display of flowers will be obtained, and the plants will suffer less from damp during wet weather, to which they are liable, when they are allowed to stand too close together.

Roses.—Where roses are to be planted, either in the borders singly, or in collections, this is a good time for that operation; when planted in the borders, they should occupy the front or side nearest the point from which they are to be seen; as the best cultivators of this flower, by training and pruning, keep them within a few inches of the ground, unless for particular purposes they may be occasionally allowed to grow to a greater height. In planting rosaries, those that are considered English roses, or such French ones as are hardy enough to stand our climate without injury, should be planted and trained by annually laying the branches to within a few inches of the ground, and so managed by judicious pruning, that the whole surface may be covered with them. The more delicate French roses may be planted in standards amongst the others, and will, in such an arrangement, have a good effect, as they may be planted out in the lawn, singly, or in lines by sides of the the walks.

Planting Shrubs and Ornamental Trees.—The planting of all deciduous shrubs, and ornamental trees should now be brought to a conclusion, as many of the forward kinds will soon be beginning to vegetate. In planting in light soils the roots of trees should be well covered with mud previously to be being planted, or as gardeners call it, mudded in, or well watered immediately afterwards, and those which are of large size should be supported in a neat and secure manner with stakes, to prevent their being blown about by the winds; evergreens of the pinus and such hardy families may be successfully planted now, but for those evergreens which are of a more delicate nature, March and April are more suitable, particularly if in exposed situations. In shaded or sheltered situations, they may, with care, be planted almost at any day of the year with success, but on a large scale, and where they are not completely sheltered, March and April will be found the better season for spring planting, and August and September for autumnal.

Hardy Annuals.—Hardy annuals of all sorts may now be sown in a dry, sheltered situation. In order to fill up vacancies, as well as to plant in such places as may at present be filled up with bulbs or other spring flowers, a considerable sowing of hardy annuals should be made in the reserve garden, from which they can be taken, when wanted, to plant in the borders; many of these plants will be rather improved by this mode of culture than otherwise; a sowing of many of these sorts should now be made, again in March, and again in April, for the purpose of rearing plants to come in succession, and to last till destroyed by the autumnal frosts.

Auriculas.—Auricula plants, in pots, should as soon now as possible be dressed and cleared of all dead leaves, reducing some of the old earth from off the surface, and a little way down the side of the pots, and adding fresh earth, which will cause them to put out fresh fibres about the upper part of the roots and greatly encourage their growth. If not provided with an auricula frame, let them be placed in a completely sheltered situation, and let them be defended from bad weather. Let them enjoy moderate showers, and if the weather be dry, refresh occasionally with water. Auriculas naturally, as well as the whole *primula* family enjoy the shade. Care must, therefore, be taken throughout the whole culture not to expose them for any length of time to the rays of the sun. Auricula seed will vegetate more quickly if placed on a little bottom heat, but as soon as they are sufficiently above ground, they should be removed to a warm, sheltered spot in the open air, for by this means they will be forwarded a little, and in cold, wet springs, and unfavourable situations, it is necessary; but in situations naturally warm, and in good seasons, they will not only come stronger, but a greater number of the seeds will vegetate if sown in the open air, or with the occasional protection of a hand glass.

Polyanthuses in Pots.—Polyanthuses in pots will require the same mode of treatment which has been already recommended for auriculas, and seeds of them may also now be sown. As the common parent of the numerous varieties of polyanthus is a native of our sunny banks and warm sheltered fields, it is more hardy than its associate, the auricula, whose common parent graces similar situations in Switzerland. A warm, shaded border, of light soil, moderately enriched with rotten manure, having a northern exposure, will, therefore, be found a suitable place for them, or they may, in unfavourable situations, be sown in shallow boxes or pans, and placed in a situation where they can be shaded from the midday sun.

Choice Plants in Pots.—Double campanulas, rockets, stocks, and wallflowers, and others in pots, should be cleared of all weeds, decayed leaves, and other rubbish, and they should be fresh earthed at top, as has been directed for auriculas. This is also about the proper time to plant out into full-sized pots any of the plants that stand in need of planting.

FOURTH WEEK.

Dahlias may now be put to work in a gentle heat: they should not be hurried, but allowed time for the tubers to swell and draw fibres before the eyes are started. Begin with a temperature of forty-five to fifty degrees. For convenience some plant them in large pots, others in boxes that hold two or more roots, while with many it is customary to lay six or eight inches depth of compost on the surface of the bed, and place the roots upon it, covering the tubers sufficiently to leave the crowns exposed, so that the cuttings may be taken without difficulty.

Carnations and Picotees.—The roots of these plants are now on the move, as will be found by slipping a plant or two out of the pots, and examining them. This may be taken as a notice to prepare for potting them off; and the sooner it is performed the stronger they will flower. It must be plain to every one that the young fibres should be establishing themselves in the new compost, instead of being allowed to weave themselves into a species of network that cannot be separated without great loss, and in many cases entirely broken off, to the injury of the plant.

Plants in Greenhouses.—The greenhouse should have good attendance at this season of the year. In open, mild weather, the plants will need refreshments of water now and then, and daily admission of air, but will not require water all alike, nor all at one time, though all should enjoy an equal benefit of fresh air. There is another thing which will be of great service to plants in general, to loosen the earth on the top of the pots or tubs, and take a little out, half an inch or an inch deep, and add some fresh in its stead; and whoever will bestow this little dressing upon them will see the advantage of it in a short time.

Flowering Shrubs.—Flowering shrubs of all kinds may now be safely transplanted, when open weather, from the seed beds or nursery rows when standing too close, and planted in wider rows, in quarters or in beds, &c., as required. If weather and time will permit, this should be completed by the latter end of this month.

Fibrous-rooted Perennials.—Plant in the borders, where there is any deficiency, roots of fraxinella and some of the handsome hieraciums. In spring plantings of fibrous-rooted perennials, observe to manage everything for forwarding the growth, or they will be behind those planted in autumn. Let the roots be taken up with care, keeping a large lump of their own earth about them; let them be set lightly and carefully into a large hole, the ends of the fibres all trimmed off, and the mould immediately thrown upon them, and settled well to them; close it carefully about the head of the root, and finish by a slight watering.

Carnations and Fine Pinks.—The season is now approaching when these should be planted out, either into the open ground or to re-pot those intended for the stage. Carnations like a rich loam of a middling texture, though they will do very well in lighter soils. Pinks will do better in lighter soils than carnations; but either will thrive in sound garden earth, moderately enriched with dung, and mixed with a small proportion of lime, chalk, or marl. Earth for potted plants, may be thus composed: one-half strong brown loam, a fourth part rotten stable-dung, and a fourth vegetable mould of decayed tree leaves, to which add a tenth part sea, or river sand, or very small gravel, with a small proportion of lime, chalk, or marl. The whole should be properly mixed and incorporated previously to using, and a stock of it should always be kept on hand. Carnations and pinks raised last season, and potted out in August, should now be put into their full pots. These should be ten or twelve inches diameter at top, and twelve or fourteen inches deep; a handful of shivers, or clean roundish gravel, should be laid at bottom, in order to drain off superabundant moisture, then fill the pot nearly half with mould. Take the plant carefully out of the other pot, reduce the ball a little, and single out the fibres if anywise matted. Place it in the new pot, so as that it shall be just as deep in the earth as before, then fill the mould all round, shaking the pot well, in order to settle it to the roots, and give a gentle watering. After the whole are potted, they should be so placed that they can be defended from bad weather, or two much wet, either by mats, canopies or the like. In good weather, let them enjoy the free air, and full sun, and be duly refreshed with water. Those put out into the borders or into beds, may be planted at fifteen inches apart each way, in order to give room for layering, if that be intended; otherwise at a foot apart. Pinks are seldom layered, and may, therefore, be planted at about twelve inches apart. Plant carefully, observing to spread out the fibres in a regular manner, and place the plant just as deep into the earth as it was before. Give a gentle watering, which repeat, till they have taken new root.

Transplanting tender Annuals.—The tender annuals that have been sown in hot-beds will now be fit to be removed into nursing pots; select the strongest plants, which should be taken up carefully, out of the pot into which they have been sown, and planted out into small pots, one plant into each, if of the size called small sixties, or three plants may be placed into each, if of the size called forty-eights; these to be afterwards transplanted into larger pots as they advance in growth. In order to have these plants fine, it is necessary that they be grown rapidly, and great care must be taken that they do not receive a check in their growth which would be apt to throw them into flower at a premature state, when their flowers would not attain so large a size, nor yet blow so fine. Throughout the whole culture of tender annuals, they should be prevented from being drawn up slender, which will be the case if kept too far from the glass; for this purpose nothing is so well adapted for their reception, after they are once potted off, as a hotbed frame of the ordinary dimensions, so that the plants may be allowed to enjoy plenty of light, and be near the glass, whilst their roots are plunged into a mild bottom heat; whilst in this bed they should be regularly supplied with water, often sprinkled over their leaves, and air daily admitted to them.

Auriculas in Pots.—Auriculas in pots should now be frequently gone over, and all decayed leaves removed, and a top-dressing of fresh mould given to them. They should, if on a frame or auricula stage, be frequently, although moderately supplied with water, and exposed to gentle showers, but care must still be taken that they be not suffered to become too wet. Air must be freely and daily given them, and when it is wished to have them flower strong and in full perfection, only one flower-stem should be allowed to each plant, all others should be rubbed off as they appear. Seeds of good auriculas may now be sown in a box of fine light earth and thinly covered, as the seeds are apt to lie dormant or rot when sown too deeply. The box should be placed in a warm, sheltered spot, and carefully defended from heavy rains. As the plants advance, they will be readily conveyed from one situation to another, in boxes or large pans, until they become sufficiently strong to be permanently potted off.

Myrtles.—Where myrtles and other similar exotics have decayed branches or the heads thin, straggling and irregular, they may now be headed down, and either shifted into fresh earth, or some of the top mould within the pots taken out and a little round the sides, then fill up with fresh earth, and water them. These trees with this management will shoot out again, and in four or five months' time will be furnished with new heads. Supply them daily with water.

Geraniums.—Examine the geraniums and other plants of a similar growth; the young shoots being somewhat succulent, are more liable to injury from the effects of the winter or great damps, than the harder wooded exotics, so as sometimes many of the shoots decay or mould, which should be carefully pruned away without any loss of time.

Seeds of Greenhouse Plants.—A hotbed may now be made, to sow the seeds of tender plants, either of the greenhouse or stove kinds. The beds should be made either of hot dung or fresh tanner's bark, and covered with frames and glass, or if made of hot dung lay eight, ten, or twelve inches of tan bark at top, either new or old, both in which to plunge the pots, &c., and to continue a longer heat. The seed should be sown in pots of light earth, and the pots should be plunged to their rims in the tan, and should be moderately watered at times, as occasion may require.

Propagation of Plants by Cuttings, Layers, &c.—This is a good season to propagate by cuttings and slips various shrubby greenhouse plants; many of the more common sorts are readily rooted in any kinds of light soil, but heaths, most of the Cape, Botany Bay, and South American plants require to be rooted in pure white sand, under small bell glasses, in heat of various degrees. Some root best in a shady frame, without a glass, and others can only be rooted from layers.

Protection of Flowers.—Protect the flower buds of the most curious kinds of tulips, hyacinths, ranunculuses and anemones in beds, from cold rains, snow, and frost, which frequently take place at this season of the year. Their flower buds will now soon begin to make their appearance, therefore it will be of much advantage to bestow the care of covering them in bad weather, and they will bloom in greater perfection. Let the hoop arches be continued over the beds for the support of covering, when the weather is frosty &c., and in cold nights draw the mats over the hoops. In mild days let them be constantly uncovered, so that they may enjoy the free air. If the hoops that are fixed across the beds be low, and too near the flowers when advanced in growth, they should be removed, and others fixed higher in their places.

Early Annuals.—If any tender annuals were sown in January, such as cockscombs, tricolours, balsams, &c., now make a new hotbed, in which to prick them. Let the bed be about two feet, or thirty inches high, then set on the frame, and when the great heat is over let the earth be put on, lay it equally over the bed six inches thick, and when warm, prick the plants at three or four inches each away; or some may be pricked in small pots, one good plant in each, and plunged in the earth of the bed, giving the whole a little sprinkling of water; then let the glasses be put on, observing to raise them behind a little every day, in order to admit air and let out steam. Shade the plants from the sun till they have taken fresh root. These tender annuals are thus to be continued forwarding in growth till May or June, then finally transplanted into large pots, flower borders, &c.

Care of Flower Borders.—Let the beds and borders in the flower garden now be dug, hoed, and raked, digging with a three-pronged fork among fibrous rooted kinds that have been thickly planted, so that their roots may not be injured, and putting up the alleys and more open spaces with the spade, dressing all neatly with the rake. About the end of the month get ready the vacant places intended to be sown and planted in March; hoe and weed the walks and alleys, and otherwise dress up the flower ground, as far as it will admit at this time, that too great a bustle may not be occasioned next month, when all is hurry with the gardener.

THE FRUIT GARDEN.

FIRST WEEK.

Vines.—Vines may be pruned now, but the sooner that work is done the better. After the winter pruning, peel off the loose bark, and wash the stem and all the shoots with soap and water, also give the border two or three soakings over the roots with soapsuds or liquid manure. If the plants should be infected with the pine bug, this insect may be destroyed by syringing the leaves with a strong infusion of tobacco stalks. If the pruning has been timely, the vine is not liable to bleed: when the sap rises before the wound is healed, bleeding ensues, and is not easily stopped. This retards the plant, but in other respects the consequences of bleeding are not so disastrous as many apprehend. To prevent bleeding, cover the wound with common white lead paint.

Strawberries. — The plantations of strawberries should now be cleared, and have their spring dressing. First take off any remaining strings or runners from the plants, and clear the beds from weeds and litter of every sort; then hoe the surface of the ground between the plants of those in beds, and dig the alleys, from which spread some earth between the rows, and close round every plant; this will strengthen and make them flower strong, and produce large fruit. Strawberry plants for forcing may now be placed in hotbeds, &c., any time this month; it is now also a very good time to place pots of strawberry plants in the hothouse, forcing-house, &c., and they will bear early.

Raspberries. — Raspberries, where they remain unpruned, should be completed during the present month. Clear away all decayed stems, and leave three, four, or five of the strongest of last year's shoots standing on each root to bear next summer; all above that number in every root must be cut away close to the surface of the ground. Each of the shoots which are left should be shortened, observing to cut off about one third or fourth of their original length. New plantations of raspberries may be made this month, where wanted. Let them be planted in rows four feet asunder, and let the plants be three feet distance from each other in the rows.

Planting Currants, Gooseberries, and Raspberries. — Whatever plantations of these fruits may be requisite, should be finished this month, if at all convenient, as if the season be favourable, they will be in a state of vegetation before the end of it. Finish, also, the pruning of these fruits without delay, as the buds will soon begin to swell, and may be rubbed off in the operation.

Digging the Ground amongst Currants, Gooseberries, and Raspberries.—The prunning of these plants being finished, let the ground amongst them be dug over, adding dung or other manure, if necessary. Dig carefully, so as not to injure the roots, and observe to bury most of the dung in the centre in order to feed the fibres as they advance, that is, in cases where they have been planted in quarters, and planted in single lines, in the borders, &c. The same rule ought to be so far observed as not to disturb other plants; but it may here be noted, that all such are best fed at their extremities. If the plantations be young, that is, under three years, a row of cabbages, beans, &c., may now be planted between the rows of bushes; or, at the proper season, a couple of rows of carrots, turnips, or potatoes, may be drilled in between them. But it is by no means advisable to crop between the rows of these plants if above three years planted, and if their roots have met. The injury done the bushes might be more than equal to the benefit reaped in cropping with other vegetables.

Pruning Fruit Trees.—The pruning of all kinds of fruit trees may now go forward with propriety. Even figs, nectarines and peaches may now safely be pruned. The effects of the winter frosts in the points of the shoots will have made it manifest where to cut, and how much to shorten.

Dressing Fruit Tree Borders.—Let all the fruit tree borders be neatly dug, when you have finished pruning and nailing. If they have been dug before, let the surface be loosened where it has been trampled on while doing the necessary work about the trees. This will be of service to the trees, the borders will appear clean and neat, and they will be ready to sow and plant, with what you think necessary.

SECOND WEEK.

Planting Fruit Trees.—In planting fruit trees of any kind, let care be taken that they be not planted too deep, for that is more material than many planters imagine. Open for each tree a circular or square hole, wide enough to receive the roots freely without pressing against the sides, and about a spade deep, then having the trees ready, being taken up with a good spread of roots, let the straggling roots be pruned, and cut off such roots as are broken or bruised, then set the trees in the hole, and see that all the roots spread freely as they should do, and in depth, so as the uppermost roots be only about three or four inches below the general surface. Break the earth well, and throw it in equally about the roots, and shake the tree gently in order that the earth may fill in close between the roots and fibres; when the earth is in, tread the surface moderately, and fix the tree properly. The following compost will suit fruit trees in general:—Procure a portion of light, rich loam, containing about three parts of sandy earth, or red earth, with one pint of black, soft, vegetable matter; to this add a twentieth part of reduced dung, a twentieth part of mild lime, and of road drift one-tenth part.

Apples and Pears *(to plant)*.—Apples and pears for walls and espaliers should be planted fifteen to eighteen or twenty feet asunder, but in some cases twenty-five is a more eligible distance, especially for some sorts of free shooting pears; though it appears considerable at first, yet if grafted, &c., upon free stocks, they will readily fill that space and bear considerably better than if confined, so as to require to be often shortened; those on dwarf stocks should be allowed not less than fifteen feet, the others eighteen or twenty feet. The rule which we advise is, to plant full standard apples and pears not less than twenty-five to thirty feet asunder; dwarf and other moderate growing standards of these kinds allow eighteen or twenty feet. The above distance advised in planting the different sorts of wall and espalier trees appear a great way, when the trees are first planted, but in seven years' time, the advantage in allowing them proper room will appear, and it should be observed to allow trees planted against low walls a greater distance than for higher walls, in order that, in default of height, there may be proper scope to expand them horizontally.

Pruning Standard Fruit Trees.—Standard fruit trees in the garden and orchard may be pruned any time this month, where necessary; when you wish to throw a young tree into bearing, several experiments may be had recourse to. 1st. By uncovering the roots, and cutting a few of the principal ones off. 2nd. By taking up the trees, and planting them in the same place. 3rd. By ringing the stem or branches. 4th. By training the branches into a hanging position. 5th. By cutting off a part or all the branches, and regrafting them, or by inserting grafts or buds in all the branches without cutting them down till the grafts or buds are established; all these means are practicable, and any of them may answer the same purpose. Of ringing, however, it is necessary to observe, that though the easiest, it is not at all proper for stone fruit trees, as from the oozing gum, the wound does not readily heal; but if at all, it should be done during the summer, as then, if performed on young wood, no injury ensues; a common racing knife is the most convenient for this purpose; it is beyond all doubt, that apple and pear trees may be kept as dwarf standards in the most fruitful state by means of ringing them from time to time close to the surface of the ground.

DISTANCES OF PLANTING FRUIT TREES.—Peaches, nectarines, and apricots, should never be planted nearer than fifteen feet asunder against walls, nor need they be planted more than eighteen or twenty feet distance.

PLUMS AND CHERRIES, for walls and espaliers, should be planted from fifteen to eighteen or twenty feet distance.

WALNUTS AND CHESTNUTS should be planted thirty or forty feet apart or more.

FILBERTS, whether planted in single rows or in a quarter by themselves, like currant trees, should not be nearer together than six, nor further apart than ten feet.

MULBERRY TREES.—Twenty to thirty feet distance.

FRUIT TREE BORDERS.—Let all the fruit tree borders be neatly dug, when you have finished pruning and nailing; if they have been dug before, let the surface be loosened where it has been trampled on in doing the necessary work about the trees; this will by of service to the trees, the borders will appear clean and neat, and they will be ready to sow or plant with what may be deemed necessary.

WATERING PEACH AND NECTARINE TREES.—Very good effects may be produced by watering the frozen branches of peach and nectarine trees very early in the morning. Apply cold water, at the time of flowering and setting of the fruit, in the following manner:—If upon visiting the tree before the sun has risen in the morning after a frosty night, you find there is an appearance of frost in the bloom or young fruit, water the bloom or young fruit thoroughly with cold water from the garden engine, but it must be done before the sun comes upon them. Thawing the frost off tender plants, or shading them when frosted, from the sun's rays, is certainly beneficial, because the greatest degree of hurtful cold is generated at the moment when the frozen moisture is evaporated by the direct rays of the sun impinging upon it, and, therefore, thawing it off by warmer water, or preventing the sun's light and heat from falling upon the frosted parts, evades the injury.

THIRD WEEK.

MELONS AND CUCUMBERS.—The plants will now require due attention. Let air be admitted to them as freely as the state of the weather will allow, and supply them moderately with water, once in two or three days. Examine the pots frequently, if the heat be violent, lest the roots be scorched, setting them loosely, or pulling them up a little in that case, or, if thought necessary, placing them entirely on the surface. If much steam abound in the bed at this time, it may be proper to leave the light lifted half an inch in the night, observing to hang the top of a single mat two or three inches over the tilt. But if the bed was carefully turfed over as directed in making up, this will seldom be necessary. Mat up carefully at night, but make a point of admitting all the sun and light possible to the plants, therefore, uncover always by sunrise, and frequently wash or wipe the glasses clean outside and inside, as they are often clogged by a mixture of steam and dust, also occasionally stir the surface of the sand or earth in the frame with the point of a stick, in order to extirpate vapour that hovers on the surface, and to purify the internal air of the bed.

PRUNING FIG TREES.—Fig trees may now be pruned with great propriety, provided their shoots have been well ripened last summer; if otherwise, the work had better be deferred till next April, lest the points of the shoots get hurt by frost, in which case they may be pruned to improper lengths, and would require to be gone over again. But supposing the shoots to have been well ripened, the following is the most approved method of pruning the fig:—The chief art in training the fig, is to keep every part of the wall full of young shoots, the plant naturally running into naked and unsightly branches in the middle. Shoots, however, may be produced with facility by *shortening*. They also rise abundantly from the root, round the stem of the plant. Producing its fruit on the shoots of the preceding year, these, if well ripened and hardened by the sun, should not be shortened, but should be laid in at full length, and at the distance of twelve or fourteen inches from each other. When the tree arrives at a bearing state, the knife should be used with caution, for the more its branches are lopped, the greater a profusion of shoots will follow in consequence, nor will such, generally, be fruitful, but soft and spongy. The most fruitful shoots of the fig are short jointed, round, and of little length in proportion to their thickness.

APPLE TREES, newly planted, must have some half-rotted dung laid about the roots, if this was not done last month.

PLANTING FRUIT TREES.—Planting fruit

trees is a work of the present season, and no care is too great in the operation. In dry soils, the autumn is best for planting fruit trees; but where the ground is apt to be wet and spongy, the present season is the most proper. Take up the tree carefully without injury to the roots, cut them with a sharp knife, and if bruised, trim them even. The cut is always to be made sloping downwards. This done, the head is to be lessened, for the roots cannot supply the usual quality of upper growth immediately after their removal. Take care that all the roots spread in a free and natural manner, and let them be set at such a depth, that the upper part of the root be just beneath a level with the surface. They must be covered a little, for the earth will settle. In setting, shake the trees a little, in order to let the mould in between all the roots, and when lightly trodden down, without bruising the roots, draw it up in a little hillock round the stem.

Cropping the Ground amongst Young Orchard Trees.—It is very proper to crop the ground amongst newly-planted orchard trees for a few years, in order to defray the expense of hoeing and cultivating it, which should be done until the temporary plants are removed, and the whole be sown down in grass. But it is by no means advisable to carry the system of cropping with vegetables to such an excess as is frequently done. If the bare expense of cultivating the ground and the rent be paid by such cropping, it should be considered enough. As the trees begin to produce, begin also to relinquish cropping. When by their productions they defray all expenses, crop no longer. We consider these to be wholesome rules both for the trees and their owners.

Supporting New Planted Trees.—Support tall standard fruit trees with stakes, as soon as they are planted, especially those in exposed situations, to secure them firmly in their places, and that they may not be rocked about by the wind, which would greatly retard their taking root. Dwarf fruit trees, with large branchy heads, should also be secured from the wind. Those against walls should be fastened thereto, and if espaliers, they should be fastened to the rails.

Pruning and Nailing.—Finish pruning and nailing all the wall trees yet unfinished. In pruning peaches, nectarines, and apricots, be careful always to have a good supply of young wood, from the bottom of the trees. The sooner in the month apples, pears, and cherries are finished the better.

Peaches and Nectarines, on the open wall, should have their buds advanced a little before pruning, or they are liable to be injured, if the weather comes severe.

Raspberries.—The raspberries that are now planted should be in rows, five feet apart, and four feet from stool to stool in the rows; let each stool contain three plants in a triangular form, and cut them down to about two feet high.

FOURTH WEEK.

Early Strawberries.—Pots of the scarlet strawberries, or Keene's seedlings, which are esteemed the best, either to succeed those of last month, or as a first introduction, as they will fruit in greater perfection than the former. If fresh plants be taken into the hothouse every three weeks, a constant supply of early fruit may be obtained till those in the open ground ripen: or pots of strawberry plants, kept in moderate dung hotbeds, may be removed in successive order into the hothouse. Some gardeners place the strawberry pots in pans or troughs, to hold water; but others think this unnecessary, provided the pots be duly watered.

Sowing Stones and Kernels of Fruit Trees.—Now sow plum and cherry stones, &c., if not done in autumn; also the kernels of apples and pears, in order to raise a supply of stocks to bud and graft upon. They may be sown any time this month, in mild weather; but the sooner the better, observing to choose a spot of clear and light ground. Let them be sown in beds three or four feet wide, covering them about an inch deep with earth. They will be fit to transplant next michaelmas and spring. The best stocks for working fruit trees upon are the following—viz., the muscle plum, and the pear on Brompton plum stock. These are usually employed for budding peaches and nectarines upon. For pears, the best stocks are raised from the pips of the most upright growing varieties of the cultivated sorts. Quince stocks are also sometimes used for dwarfs, standards, or espaliers. Crab stocks are preferred for apples, and cherry stocks are raised from their stones. For apricots, the muscle and common plum stocks, and also the Brussels, or St. Julian, are employed.

Strawberries.—Strawberry beds must now have a careful and thorough dressing. The strings must be taken off, the weeds pulled out by hand, and the earth broken lightly and carefully with a trowel. Then let a little fresh mould be sprinkled in between the plants, and gathered about their heads.

Gooseberry and Currant Bushes.—If any branches have been left that had better been removed, or anything left at the pruning that now appears improper, let it be taken out. Let the earth be dug between and about them; and if the weather be dry, give them, at the interval of three days, a moderate watering. These shrubs are in general too much neglected: they will thus blossom earlier, and the fruit will be better. Dig carefully, so as not to injure the roots; and as all roots are best fed at their extremities, we recommend the dung to be placed in the centre of the intervals between the bushes, instead of giving it promiscuously over all the space between the rows, and most generally close to the stem of the bushes. When these fruits are planted in quarters, they should be renewed every seven or ten years. In that case, finer fruit would be produced, and the plants could be kept within such bounds as to admit of the ground between the rows being cropped with culinary vegetables. The Lancashire gardeners grow their finer gooseberries in very highly manured soils, and give copious supplies of water, and often apply liquid manure. By this method, and by shading and thinning the fruit, they obtain it of such a size that it is not surpassed in any part of the world. They not only water at the root, but often place small saucers with water under each fruit: this is what they call *suckling* their gooseberries. When fruit of the largest size is required, they often do not allow more than three or four berries to remain on a tree. They also cut off the greater part of the young wood, so as to throw all the nourishment possible into the fruit.

Watering and Mulching Newly Planted Fruit Trees.—Trees planted in autumn or in spring should be regularly supplied with water, both at their roots and also over their branches, particularly in dry weather. This will greatly promote the breaking of their buds, and ensure their taking to the soil. Mulching round the roots should not be neglected.

Transplanting Stocks to Bud and Graft upon.—Make new plantations of stocks to bud and graft the different kinds of choice fruit upon. Many of those raised from seed, &c., last year, will now be ready for this purpose. Let these be planted out as soon as the weather will permit, in rows two feet and a half asunder, and fifteen inches distant from one another.

Heading Down Budded Stocks.—Head down budded stocks, or such young trees and shrubs that were budded last summer. Let this be done with a sharp knife, observing to cut the head off about four inches above the place where the bud is inserted.

Raspberries.—Raspberries may still be pruned, if not done within the preceding month, and new plantations of them may yet be made.

Pruning Fruit Trees.—These trees may still be pruned; but the sooner now the better, particularly apricots, cherries, figs, plums, and the early kind of pears, which will now be soon coming into bloom. Orchard trees and standards of all kinds may now also be pruned, if not done in the former months; but when it is necessary to wash or anoint the branches of any kind of fruit trees, the pruning should not be delayed beyond the first week in March, otherwise the buds are liable to be hurt, or to be rubbed off in the operation.

THE KITCHEN GARDEN.

FIRST WEEK.

Asparagus (*to force*).—Having in the preceding number given the necessary directions for the formation of the beds, we shall now proceed to enter into some details relative to the mode of management of the plants. When the heads of the asparagus begin to appear, add three inches deep of mould, previously to which a wreath of straw bands should be fixed round to the top of the bed close to the edge, on which to place the frame; when the wreath is thus fixed, cover the young buds of the asparagus all over with light earth, three or four inches thick, or as high as the top of the first wreath, so as to have it six inches in depth at least in the whole over the crown of the plants. The bed will begin to produce asparagus in four or five weeks, and, provided the heat be kept up, will continue producing buds in great plenty for about a fortnight or three weeks. A bed for a three-light frame will for that time produce three or four hundred buds per week. The method of gathering asparagus in hotbeds is to thrust your finger down gently into the earth, and break the buds off close to the roots, which they will readily do, but cutting them with a knife, as practised in the natural ground, would, by reason of the buds coming up so very thick, one under another destroy more than you gather. When designed to raise asparagus plants for forcing, some seed should be sown every year in a bed of rich earth, observing when the plants are one year old to transplant them into an open compartment, in rows nine inches asunder, and about the same distance in the rows. When they have two or three summers' growth, they are fit to take up for forcing, but if they stand three years before they are taken up, they will produce much larger buds. It is necessary to have three pieces of ground employed at the same time with asparagus plants for the above purpose, that is, one piece for the seed bed with seedling plants, which should never stand longer than one year before being transplanted; the other two pieces to be occupied with transplanted plants; one to be a year's growth from the time of planting before the other, by which method of sowing a quantity of seed, and planting out a number of plants every spring, you will, after the first three years, obtain a fresh supply of proper plants fit for forcing.

Beans.—Dig an open quarter of ground the beginning of this month for a full crop of beans. The best sorts for main crops are the broad Spanish, Windsor, Large sword long pod, Toker, Sandwich, &c.; but it would be advisable to plant others occasionally to increase the variety. Plant them in rows a yard asunder, and four or five inches distant in the row, and not more than two or three inches deep. Beans may be planted either by dibble or in drills, the depth above mentioned. Beans which up and advanced from two or three to five or six inches high, should have earth drawn up to their stems, which will strengthen them and protect them from frost. Let this be done on a mild dry day.

Beet.—This is now the time to sow the different sorts of beet, the red for its large root, and the green and white sorts for their leaves in soups, stewing, &c. Let the sorts be sown either broadcast or in drills twelve inches asunder.

Borage, Burnet, Lovage, Angelica, &c.—You may now sow borage, burnet, clary, and marigolds, orach, carduus, dell, fennel, bugloss, sorrel, chervil, angelica, and lovage, and such like herbs, any time this month when the weather is open. Sow all the above seeds moderately thin, and each sort separately in a border, or beds of light earth, or may be sown in drills, six to twelve inches asunder, some to remain where sown, others planted out in summer.

Brocoli.—Early white: prepare a slight hotbed for the seed of this favourite kind of brocoli, which should be sown in the course of this month. When the plants are up, give plenty of air, and defend them by covering in frosty weather.

Cabbage.—Cabbage seed may now be sown for summer and autumn use. They will be fit to cut in July, August, and September; sow also red cabbage for next winter's supply. Cabbage and savoys for seed may be planted this month, if not done before; take up the plants on a dry day, clear off all the large leaves, and plant them two feet asunder each way, placing them so deep that no part but the head may appear above ground.

Cauliflower Seed.—Sow cauliflower seed any time this month, to succeed the early crops, or in case none were raised last autumn for early plants, or that these have been killed by the severity of the weather. But in order to bring the plants up soon, and to forward them in growth, it will be proper to sow in a slight hotbed.

Coriander and Chervil.—Coriander and chervil for soups and salads, &c., may be sown the beginning of this month, when dry, mild weather, sowing each sort separately, generally in shallow drills, six to nine inches asunder, and covered in with earth, about half an inch deep. These plants are always to remain where sown; and as they soon fly up to seed, some should be sown every month.

Garlic, Rocambole, and Eschallots.—Prepare some beds of good ground, four feet wide, in which to plant garlic, rocambole, and eschallots, of which procure some best bulbs; divide the garlic, rocambole, and the eschallots as they admit; plant them in rows, eight or nine inches asunder, by six inches distance in each row, and one inch deep. They may be planted either with a dibble or in drills drawn with a hoe.

Lettuces.—The beginning of this month, if the weather be mild, several sorts of lettuce seeds may be sown in warm borders. The white and green cos, and the Silesia and cabbage lettuce are proper sorts. Some of the imperial and brown Dutch, or any other sorts, may now be sown. Or, in order to have a few lettuces forwarded for transplanting, you may early in this month sow cos or other lettuce seeds in a frame, and cover them occasionally with glasses or mats, in nights and sharp weather; and when the plants are advanced about two inches in growth, they may be transplanted in the open ground.

Mangel Wurzel may now be sown, for its large green leaves to boil as spinach, and thick fleshy leaf stalks to dress like asparagus.

Parsley.—Sow full crops of parsley, either in drills along the edges of some of the quarters or borders, or in continued rows, nine inches asunder.

Peas.—Sow a principal crop of peas the beginning of this month on an open piece of ground; continue sowing a succession of the Hotspurs and other small kinds; and it is now a fine season to sow full crops of the large sorts of peas, such as marrowfats, ronnecvals, Knight's marrowfats, &c. For sowing marrowfats, and other large peas, draw drills three feet and a half asunder, but if you intend to set sticks for these large kinds, draw the drills four feet distant. Hotspur and other smaller kinds of peas should be sown in drills two feet to a yard asunder, but if you intend to place sticks, allow three feet and a half between the rows. The drills should be drawn with a hoe, about an inch and a half to two inches deep.

Radishes.—Dig a warm border the beginning of this month for some short topped radish seed to succeed those sown last month; dig another piece at the time, and sow it with salmon radish seed. They will succeed the short tops. About a fortnight or three weeks after, let some more of both sorts be sown in an open situation in larger portions for the main crops, that there may be a regular and plentiful supply in their proper season. Continue to cover the early crops of radishes in frosty weather and cold nights with straw, &c., as directed last month. If a succession of early radishes be required, let some dwarf short tops be sown in a moderate hotbed. Sow a few of the small white turnip radish to draw for salads in April and May; they eat crisp and are agreeebly flavoured; or some may be sown in a slight hotbed to have them come earlier by a fortnight or more.

Small Salading.—Small salading, that is, cresses, mustard, and chervil, may now be sown on an early border, either in beds or in rows, but by being sown in rows, they are more easily gathered; drill half an inch deep, and six or eight inches asunder, and sow thickly; sow every eight, ten, or twelve days, according to the state of the weather and the demand for the salads; a small quantity of each at a time will be sufficient to supply an ordinary demand. A drill of each kind ten yards in length, will give a large supply, the sowings being repeated once a week.

SECOND WEEK.

Asparagus.—The heat of some of the beds which have been appropriated for forcing, will now have considerably declined, if not abated altogether; the plants may, therefore, be taken out and planted in the open grounds, where they may either remain as a general summer crop, or be applied again to the purpose of forcing at the close of the year. The bed, however, from which the asparagus has been taken, may be applied to several useful purposes, as the forwarding of plants for the culinary or flower garden, for the heat may in a degree be partially restored by linings; at all events, there will be a sufficiency to promote and expediate the growth of the plants, which are put into it. Fresh beds may be made for the forcing of asparagus plants, should a regular supply be required.

Cauliflowers.—In whatever situation they may be, whether under glasses or frames, they should be protected in severe weather by straw, peas, haulm, or any dry litter that can be conveniently procured; mats may be thrown over the glasses, and all attacks of frost prevented. The plants should be carefully examined, and all dead leaves removed; if any plants have died, they should be instantly taken up, for it is in their roots that slugs and snails will be found to harbour. If the plants have been planted thickly under the hand glasses, they may now be thinned to about two, but the plants so thinned may be again planted immediately under glasses or in a frame, and they will make an excellent succession crop. Some cauliflower seed may also now be sown in a moderate hotbed to produce plants for a late summer supply. They should be sown in a good loamy soil, not thickly, and then covered slightly with the same kind of soil, finely sifted through a sieve; as soon as the plants appear, air must be regularly given to them, whenever the weather will permit. It is good practice to inure plants in frames to the open air as much as possible.

Celery.—The celery plants which were planted for the spring supply should be regularly earthed up whenever the weather will permit; this operation, however, should never be performed but on dry days. Celery seed for an early crop may now be sown. Select a rich, light bed of earth on an early border, or sow at the bottom of a wall or other fence, cover lightly, and rake fine. If this vegetable were required very early, this is the most proper season to sow the seed, and its progress may be promoted by being covered with a few hand glasses, or a frame and lights; it must, however, be borne in mind that this sowing is not to be depended on for a crop, the plants raised so early being apt to shoot for seed. If the seed be sown in a hotbed, a small quantity of cabbage, radish, or lettuce seed may be sown with it, by which some early plants will be obtained, some of which may be allowed, particularly the latter, to remain in the bed to perfect their growth.

(*Continued on Page 50.*)

THE STRAWBERRY.—*See page* 58.

THE AURICULA.—*See page* 60.

KITCHEN ARDEN.

CONTINUED.

CUCUMBER AND MELON SEEDS.—If cucumber and melon seeds were not sown last month, it is still a good time to begin that work, making a seed hotbed for sowing the seed, as formerly directed. Those which are sown early in this month will, with good management, produce fruit in the end of March, or beginning of April,—and those sown in the middle or latter end of the month will have fruit the end of April, and bear plentifully in May, June. The beginning of this month is a very good time to begin to sow melons for the chief crops in frames.

HORSERADISH.—This plant is propagated by cuttings of the root, either cut from the top an inch or two long, or some old roots cut into pieces of that length. The method is as follows:—First procure a number of proper sets, which may be either the small offsets that arise from the bottom or sides of the main roots, and of which take cuttings of their tops, two or three inches long, or use the tops and crowns of the old roots when taken up for use, in cuttings of the above length, or in default of a sufficiency of crowns or tops of either, you may divide a number of old knotty roots into cuttings in the before mentioned lengths, which, if furnished each with two or three buds or eyes, will make tolerable sets; but give the preference to the cuttings of the crowns or tops, if enough can be procured, observing that when intended to make a fresh plantation, you should, during winter, when you take the plants up for use, reserve all the best offsets for planting, also the crowns of the main roots; but this latter is only practicable in private gardens, for where the large roots are designed for sale, their tops must not be taken off, which will render them unsaleable in market; therefore, the market gardeners always reserve the strongest offsets arising either from the bottom or emitted from the side of the main root. The sets may either be planted with a dibble after the ground is dug or trenched in as you proceed, one good spade deep at least. Choose an open situation, and as light and deep a soil as the garden affords.

KIDNEY BEANS.—Sow more kidney beans, if a succession of them be required to succeed those sown in January, either in boxes or pans, or the common garden pot; if the latter, about three in each pot. They may be placed in a cucumber or melon frame, or in any other hotbed where there is room. Let them be duly supplied with water, and plenty of air must be given to prevent their being drawn up spindly. The beans which were sown last month will now be fit to plant out when they are three inches high. If intended for large pots, three or four may be planted in each pot in light, rich earth or cucumber mould. The pots should only be filled about three-fourths at first, that the plants may be strengthened by being afterwards earthed up, as they advance in growth. When beans are placed in frames or hothouses, they are often attacked by the thrips, and, therefore, the plants should be fumigated with tobacco, which will effectually destroy the insect.

LIQUORICE (*to plant*).—Now prepare some deep ground in which to plant liquorice, when required. The ground should have two or three spades depth of good soil, and also trenched that depth, in order that the root, the only useful part, may run considerably deep in the earth. Procure sets of the small horizontal roots which run near the surface of the ground, cut these in lengths of six inches and plant them, by dibble, in rows, a yard asunder, by half that distance in the row, placing them wholly within the earth; as soon as planted, may sow a thin crop of onions in the same ground the first year. Keep them clean from weeds all summer, and when the onions come off, hoe the ground well, and in winter slightly dig the ground between the rows. They must be permitted to have three years' growth, cutting down the decayed stems every October or November, and in the third or fourth year, the main roots will be of full length and size then dig them up in winter, beginning at one end of the ground, and opening a trench quite to the bottom of the first row of roots; so continue row and row, taking out all the roots as you go on to the bottom.

MUSHROOMS.—Take care that the mushroom beds are well defended from heavy rains and frosts, both of which would destroy the spawn.

PEAS.—A full crop of Charltons may now be sown, and marrowfats at the end of the month, choosing an open situation for either, observing, however, to allow marrowfats, Rouncevals, and all the larger kinds, six inches more between the rows, and sow them thinner than the Charltons or the blue Prussian sorts. The kind of peas are almost innumerable, but any may now be sown according to fancy, bearing in mind, however, that the Charlton, dwarf marrow, and the Prussian sorts are the most productive also the fittest for small gardens, on account of their requiring less room than the larger kinds. Stir the surface about the early crops that have risen, and earth up those further advanced. This operation to be performed only on a dry day.

SPINACH.—Now hoe and clean the winter crops of spinach, and if they be ever so free from weeds, let the earth be stirred about the plants. These crops should previously be thinned out to eight or nine inches square, if broad cast, and to three or four inches between the plants if in drills. Spinach thus managed, will produce a fine large blade, if on good land, and will fill the basket much better than if left untbinned, which is too frequently done. Choose good weather for this business, and observe to loosen the surface well amongst the plants, particularly if the soil be stiff, and if the ground has been much battered by heavy rains or snow in winter. Spinach requires a richer soil than almost any other culinary vegetable to bring it to perfection, as it has to yield frequent gatherings or cuttings, and, therefore, requires a repeated development of parts, which cannot be expected without an abundance of food.

SMALL SALADING.—Sow the different sorts of small salading once a week or ten days, such as cresses, mustard, raddish, rape, and lettuce, or they may be raised in pots, in cucumber frames. About the middle or latter end of the month small salading may be sown in warm borders in the open ground, which, if the weather continues mild, will succeed tolerably well without any covering.

TURNIPS.—Sow some early Dutch turnip-seed about the middle of this month in a warm open spot of light ground; but as these early-sown plants will soon run up to seed, before the roots attain any tolerable size, sow only a small quantity at this time, to come in early in May.

THIRD WEEK.

ASPARAGUS SEED.—The best season to sow the seed of asparagus is the latter end of February. It should be sown in a spot of light, rich ground; sow it tolerably thick, and tread it down evenly, then rake it into the ground. The season to transplant from the seed-bed is in March. Those persons, however, who do not choose to raise plants themselves, or such as desire to be furnished with them till their own are ready, may be supplied by most of the kitchen gardeners near great cities, but particularly those near London, many of whom raise great quantities purposely for forcing. They may be purchased by the rod of ground on which they grow, at about eight or ten shillings per rod; they are generally between two or three hundred roots in a rod, and two and a half, or three rods at most, are sufficient for a three-light frame. Asparagus may be forced in boxes where dung is scarce; the most convenient boxes are about three feet long, and fourteen or fifteen inches deep. Fill them half-full with a compost formed of leaf-mould or old tan, mixed with well rotted cow-dung and light loam; in this place the roots as thick as may be, fill up the boxes with the compost, and place them anywhere in a house, where they may have sufficient heat. Eighteen such boxes form a set, six of which being forced at once, yield a very fair supply, and at any time the same may be required.

BEANS.—Any of the beans recommended last month may now be sown, and the sooner the better. In this, and in all other cases connected with planting and sowing, the exact time must, in a great degree, be regulated by the state of the weather, and nature of the soil. In light sandy soils, sowing and planting should be done as early as possible, and in wet, strong soils, the seeds are better in the seed-room than in the ground, when it is not in a proper state to receive them. The green China bean is a good sort, and keeps much longer in a state fit for use than any other. Beans may be sown in boxes, for which purpose the magazan is the most proper sort. The most economical method of growing beans is to sow in drills from ten to twenty feet apart, and fill betwixt the rows afterwards with such crops as are requisite.

BROCOLI.—The seed intended for the crops in July, August, and September, should now be sown. The best kinds, are, the Cape, Grange's early, Early white, Portsmouth, and other celebrated sorts. Grange's white brocolio is an excellent and well known variety, and should be sown at this time for the purpose of obtaining plants fit to put out in the beginning of July, in order to produce heads in autumn, and a secondary sowing should be made in April, in order to produce plants for a later plantation, say the second week in August, which latter crop, if not destroyed by the severity of winter, will produce excellent heads in spring.

CABBAGES.—Begin to sow cabbages for winter; a fortnight hence will be better for the large crop, but a small parcel now will come in at an acceptable time. Dig the ground for the whole crop, and sow the small quantity in the warmest place; in the following week another portion, and so on, till the whole be sown. Spread over the ground a good quantity of old rotted dung from a melon bed, and a little coal ashes. Dig and work these well in, and level the surface for a small part of the ground. On this sow the cabbage seed. A month from the time of sowing, the plants will be of a height for their first removal, and this must be successively done with regard to the several crops. The autumn-sown cabbages may now be transplanted, to come into use in July.

CAULIFLOWERS.—Cauliflower plants in frames should have plenty of air every mild day by entirely removing the glasses. About this time transplant some of the strongest plants into the place where they are intended to remain. Plant them in rich ground, allowing them thirty inches, or three feet each way. It will be necessary to choose a sheltered situation for this crop, and also to shelter them occasionally. Cauliflowers, under hand or bell glasses, should also be thinned out where they stand too close, that is, if there be more than four plants under each glass; all above that number should be removed. Cauliflowers sown at this period upon a slight hotbed will produce their heads in May.

CELERY.—About this time prepare a small bed of light, rich earth, in a warm, sheltered situation, in which to sow some celery seed for an early crop. The plants raised from this sowing will come into use about the middle of July. The Solid upright, Upright Italian, Manchester red, Red solid, &c., are the best sorts. The Kentucky is an excellent variety imported from America, grows large, and is very superior in quality.

CARROTS.—Any time this month carrots may be sown for an early crop, but the beginning of April is soon enough to sow the principal sort. The Early horn and the Early short red horn may be sown on a slight hotbed for the first crop, and towards the end on a warm south border to succeed them.

CHIVES are used by many, both in the kitchen and in salad, and are an excellent substitute for young onions. They will grow almost in any soil, and are easily propagated by sets. They may be planted in rows, eight or nine inches asunder, and six or eight in the row. Any time in this month, or in March, will be a proper time for planting.

KIDNEY BEANS.—This is an excellent time for making a hotbed for early kidney beans. Prepare for that purpose some new horse-dung, as directed for cucumber hotbeds, with which let the beds be made about two feet and a half high, and long enough for one or more frames. Make the surface of the bed even and smooth, and put on the frame. When the heat has become moderate, let the bed be covered with rich light earth, seven or eight inches thick, then draw drills from the back to the front, a foot asunder, and an inch deep, drop the beans therein two or three inches apart, and cover them an inch deep. Or the beans may be sown thickly in a small hotbed, or in pots therein, in order to raise plants about an inch in growth, then to be transplanted into a larger hotbed. The best sorts for this purpose are the Early white dwarf, black and liver-coloured Dwarf kidney beans, because they come earlier, and do not run so strong or rampant as many of the other sorts. When the plants begin to appear, raise the lights a little behind, every mild day, in order to admit fresh air to strengthen their growth, giving also occasional gentle waterings, continuing the same in their advancing state, and support a proper heat in the bed; they will thus afford an early produce in April, &c.

LETTUCES.—The beds of the finer kinds of lettuces must be now examined, as the plants will be ready to remove. Let a bed of rich light mould be well dug, and marked into squares of a foot in breadth. In each of these let there be one lettuce set, every morning give a gentle watering with water that has stood all night in the house. In each of these let as many be left as the ground can well maintain at a foot distance every way. They must have a gentle watering every other morning; they will grow to their due size very quickly. It is possible that the cabbage lettuces may not have survived the winter. A little seed should, therefore, be sown, and a fresh bed made once in ten days.

ONIONS.—This is a proper time to sow a full crop of onions on land of middling texture. If, however, the land be heavy and wet, the sowing had better be deferred till the following month. There are several sorts of onions, viz.—the Strasburg, Deptford, Portugal, or Spanish, Red skinned, Silver skinned. Any of these may be sown at this time, but the two first, which are, indeed, said to be one and the same, generally produce the best crops, and are certainly the best keepers. The land should be well broken in the digging. If it have been manured for the preceding crop, and be in good heat, so much the better, but otherwise, it will require to be manured. In this case a compost of stable-dung, cow-dung, and earth is to be preferred to any simple dung. At any rate, new rank stable-dung is improper, especially for light soils. Neither dig nor sow if the ground be not in a comfortably dry state, otherwise the seeds will not rise freely. Sow either in four foot beds, thinly, and cover to the thickness of a quarter of an inch, or in shallow drills, eight or nine inches apart, also thinly. Rake all smooth, but tread none in either case. The winter crop of onions should be gone over about the end of the month, be cleared from weeds, and be thinned, if needful, and let the surface be well stirred up amongst the plants. If green onions be in demand for the use of the kitchen, they need not be much thinned out at this time, but rather delay the final thinning till about April or May.

PARSLEY.—Parsley may again be sown for successional crops, preferring the curled sort, as being more luxuriant and handsome. Hamburgh parsley may also be sown in drills a foot asunder, and two inches deep. It will thrive well in any ordinary garden soil, which is of sufficient depth and not over rich.

PARSNIPS.—This is the proper season to sow parnips; they should be sown in drills eighteen inches or two feet apart, and two wide. In garden culture they will be found to obtain their greatest perfection in ground rendered sufficiently deep by trenching, and manured with chalk and lime.

SPINACH.—Spinach of the round sort may be sown in an open spot, and also for successional crops, any time during the present month.

FOURTH WEEK.

ARTICHOKES.—Plantations of artichokes may be made about the end of this month, according to the forwardness of the season. This plant requires a light, rich, deep soil, in order to produce it in perfection. The strongest crops we recollect ever having seen, grew in rather a mossy earth that had been trenched fully a yard in depth, and had been well enriched with dung, and limed. The plants were generally covered before winter, with a mixture of stable litter and sea-weed. They are propagated by sets, which rise plentifully about the old shoots. The ground should be trenched, or dug to its full depth, if that were even a yard, and should be well enriched with dung or compost, to suit the nature of the soil. Plant in patches of three sets in each, at a foot apart, and four feet from centre to centre of each patch. Observe to plant no sets that have not fibres, or otherwise they will not succeed so well, and do not plant too deep; crop the leaves so as to reduce the sets to the length of six inches above the roots. Give a hearty watering, if the weather be dry. A little spinach or turnips may be drilled in between the lines, which will come off before the plants spread far and interfere with them.

ASPARAGUS.—Asparagus delights in a rich deep land. It may be produced in great perfection, however, in light loamy earth, well enriched with dung, or with compost. In any soil, sea-weed suits this vegetable well; and it has been produced in very great perfection in a sheer sand, without any other manure whatever. It does not thrive well in stiff or wet soils, nor in any that are less than half a yard in depth. Of course, the land should be well trenched, to the depth of thirty inches if it will admit of trenching so deep, and should be well broken if anywise stiff. The manure ought also to be intimately mixed with the soil, even to the very bottom, and the greater part of it should be applied there, because it is difficult to get it manured afterwards, as the roots of the plants should be as little disturbed as possible. It is common to raise asparagus in a seed bed of light earth, and to transplant it at one or two years old, either into broad beds with two feet alleys between them, or into single rows, at thirty inches or a yard apart, which latter is the better method of the two. But the best method we know is to sow the seed where it is to remain, in drills an inch deep, and three feet asunder, sowing rather quickly, in order to insure a crop, thinning out to five or six inches after the plants have come up a few weeks. The latter end of the month the seed may be sown; but in this the cultivator must be regulated by the state of the weather. A row of cauliflowers may be planted, or a drill of carrot, turnip, or onion may be sown between the lines without injury for the first or second seasons, but no longer. After this time the root of the plants will begin to spread into the intervals, and must on no account be disturbed by any other crop. Asparagus plants wear out in eight or ten years, and become unproductive; a little, therefore, should be sown, and a little taken up every two or three years; but market gardeners and others, who force large quantities, need to sow or plant a supply each season.

BEANS.—Plant beans of all approved kinds, for any sort succeed well from this time of planting; this is also the proper time to plant full crops for the principal supplies. Transplant the beans as recommended in January. Take them carefully up, separate them so as not to injure the roots, draw drills three inches deep, place the plants six or eight inches apart in the rows according to the kinds, and from four to five feet between the lines, or plant in single lines; fill in the mould round the stems, and give a little water, if the ground be dry, which is seldom the case at this season, to settle the mould about the roots. Shade or protect them for a few days with branches.

Beet.—Beet may now be sown for a large crop. The excellence of this root depends upon its size, therefore, let the ground be dug very deep and very broken. The seed may be sown either broad cast or in drills, about ten or twelve inches asunder. The red and the white sorts must be sown separately. The situation must be dry and open.

Borecole.—This is now about the season to sow some borecole for the service of autumn, winter, and the following spring. There are two principal sorts, the green and the brown, both very hardy plants of the large open colewort kind, with tall stems, and full heads of thick curled leaves, not cabbaging, and are desirable open greens for winter. The sorts are the green curled borecole, red curled, Scotch curled, tallest Anjou, Milan, or chou de Milan, Brussels sprouts; the first three sorts are preferable for the main crops, and all equally good as boiling greens from September to the following spring, deserving culture in every garden from their hardiness to stand the winter. Procure, if possible, the most early sorts.

Brocoli.—By those who wish to have early crops, the seeds of brocoli may now be sown, but it is yet rather too early, as the plants raised from the seed now sown are apt to start, or button. Sow of the dwarf purple green, or of the dwarf, sulphur-colour kinds, thinly on a bed of light earth, in an open exposure. Cover to a quarter of an inch in depth, and rake fine.

Brussels Sprouts may also be sown at this time, and the same system of management pursued as that directed for brocoli.

Cabbages.—Sow the seeds of cabbages of any sorts the latter end of this month, both of early kinds for successional young summer cabbages, and large late sorts for autumn and winter crops. Any of the early kinds may now be sown, either for successions or as substitutes in default of early winter standing plants, or for general summer crops.

Carrots.—Carrots should be always sown in good time, as the seeds lie long in the ground, and they are by many persons coveted early. A few in a favourable situation should be sown if the weather be tolerable, digging the ground well and deep for the purpose; for if it be lumpy the carrots will grow forked, as they will also if the ground be fresh dunged. Carrot seed should be mixed with dry sand or earth, rubbing them well together, in order the better to spread it equally. In sowing, use about twice as much sand as seed, and if earth, it were better to be of a different colour from that on which the seed is distributed, that it may be seen.

Cauliflower.—Sow in an early border of rich earth, at the end of this month, for a succession of summer cauliflowers; the border in front of a stove, pit, or early forcing-house is a very eligible situation, and preferable to a hotbed. At the end of the month plant out for an early crop in a warm, rich border, well manured, at two feet square, and observe not to plant too deep. If it be intended to cover with hand-glasses, a few to come in the earliest, they may be planted so that a glass will cover two plants; but if bell-glasses are to be used, one under each will be enough.

Celery.—For early celery, a little seed should now be sown in a gentle hotbed, or in a warm north border, under a hand-glass or not. When cultivated so early, it is apt to run; but if only a few plants stand tolerably, it is worth while to try, and even when in a pipy state, it is an excellent addition to soup. Sow thin, cover lightly, and keep the earth moist, for the seed is slow in coming up, if the weather be dry.

Jerusalem Artichokes. — They may now be propagated, by planting cuttings of its roots, like potatoes. The root is red and full of indented eyes, every one of which is sure to grow. Where it had been once planted it must be carefully dug up, or it will not easily be got rid of; any poor ordinary spot of spare ground will do for it. Preserve the roots in dry sand, when they can no longer be preserved in the ground, immediately dug from which they are much the best.

Kidney Beans in the Hothouse.—Now plant some more kidney beans of the early white, the dun, and speckled dwarf, &c., in pots or boxes, and put them in the hothouse to succeed those planted last month. Refresh with water the kidney beans planted last month; they will require it two or three times a week; give also necessary waterings to the young beans advancing for successional crops.

Leeks.—If the weather be tolerable, the seed may now be sown. In April, the crop must be thinned to three inches asunder, and planted out the first moist weather after midsummer, in rows near a foot apart, and at six inches in the rows, though if the ground be very rich, and the leeks forward, a little more may be allowed to advantage. Trim the tops and end of the roots; and it is a good way, if the soil be not heavy, to plant with a dibble, two or three inches in the ground, in order to whiten the heads; but to this end, some have planted leeks in trenches, and earthed them up high with a light soil, or coarse. At any rate, if the rows be wide, earth them up a little.

PEAS.—Early fame, blue Prussian, tall and dwarf marrowfats, and other approved sorts of peas should now be sown for general crops in the open quarters of the garden. From the middle of this month, make successive sowings every three weeks during the months of March, April, and May, and twice in each of the months of June, July, and August, reducing the quantity each time from the end of June till the middle of August. The crops of the latter sowings will depend on the state of the weather during the following autumn, and in general they are small and scanty. Knight's improved marrowfat is the best for a late crop, being less liable to be affected by the mildew than the other sorts. For the early and dwarf crops, sown in the beginning of this month, from three to four feet will be plenty between the rows, and three inches deep; for the taller growing sorts, such as the marrowfats, &c., four or five, or even six feet will not be too much between the rows. We submit the following excellent advice to all cultivators of this vegetable, in regard to sowing:—"You get nothing by crowding them, nor do you get anything by sowing double, instead of single rows of peas. If you try it, you will find that a single plant, standing away from all others, will produce more fruit than six plants standing in a common single row, though the soil be the same, and though the stick be the same height."

POTATOES.—A few may be ventured in a warm, light spot, under a wall or other fence; but the nearer the end of the month the better—that is, for those who have no other conveniency, or other means of raising early potatoes; but by those who have, some of the early sorts may now be sown thickly on slight hotbeds, to be covered with a frame and lights, or to be hooped over, and be covered with mats or canvas at night, and in bad weather, which last is a very good method of obtaining early potatoes, as they are not so much drawn as if kept close under glass. A moderate dung heat is sufficient for the purpose; and the plants, after they have come up, should be exposed from morning till night in good weather, but should be carefully covered at night for fear of frost. Even in using frames and lights they should be fully exposed to good weather, and should not be kept so closely shut up, as is commonly done, by which they are drawn entirely to tops, and do little good at root. In either case, they should have moderate and regular supplies of water.

SAVOYS.—Savoy seed may now be sown, for the first crop, about the latter end of this month. Those savoys which are now sown will be ready in September, and they will be finely cabbaged by October, and will continue in good perfection all November and December.

SCORZONERA, SALSAFY, AND HAMBURGH PARSLEY.—The latter end of this month, some scorzonera, and salsafy, and Hamburgh parsley may be sown. These plants are in some families much esteemed for their roots, which are the only parts that are eaten, except the salsafy, as explained below. The roots run pretty deep into the ground, in the manner of carrots, and are eaten either alone or with butcher's meat like young carrots, &c. These are fit for use from July to March, but the salsafy is esteemed both for its roots and for the young shoots rising in the spring from the year old plants, which being gathered whilst green and tender, are eaten in the manner of asparagus. Dig one or more beds for each of the above in an open situation, sow the seed either in shallow drills, six inches distance, and earthed over half an inch, or sow on the rough surface, and rake them in equally. They are all to remain where sown, and the plants thinned in May or June, to six inches distance.

DISEASE IN POULTRY.—We have found that giving poultry some dry American cheese, crumbled up and mixed with rue, given as a bolus, night and morning, not only prevents the disease which is sometimes so fatal to poultry, but also causes hens to lay much earlier than otherwise.

COMPOST FOR AURICULAS.—One of the most celebrated growers of the auricula in this country, has kindly favoured us with the recipe for a compost for auriculas, which he has used for twenty years with the greatest success. Take sugar scum, human manure, and flesh loam, equal parts; mix them well together, and let them remain for two years, carefully turning the compost every month. It should be kept in a dry situation, subject to as little moisture as possible.

THE CINERARIA.

The cineraria, from the diversity of its colour, has lately become a great favourite with florists; and it may be said that there are few flowers to which more interest is attached, combined with its easy management, than in the numerous members of th genus cineraria. It is a flower that remain in bloom for a considerable time; and start ing, as it does, into a variety of colour forms a most attractive object, not only i the greenhouse, but in the window of the citizen and artizen, throughout a great part of the winter, and all the spring months: indeed, in the latter situation, it is one of the most interesting flowers that can be selected. Its propagation is a task of very little difficulty, it being easily increased both by seeds and cuttings. If the former mode be adopted, the seed should be sown in small pans as soon as it is collected, the soil most proper for the germination of the seed being a compound of loam and leaf mould in equal proportions, to which may be added an equal portion of silver sand. The pans should be placed on a gentle bottom bed, giving them a moderate watering; and as soon as the plants begin to make their appearance they may receive a good portion of air during the day. As soon as they have attained a sufficient size to be handled without injury, they should be potted, putting each plant separately into a 60 sized pot, and placed in a cold frame or pit. About the beginning of October they are shifted into No. 32 sized pots, in which they remain until March, when they are placed in the pots from which they are intended to bloom, giving them an occasional watering with liquid manure. The compost used for this potting is a mixture of loam and dung in equal parts, adding a sixth of the whole of leaf mould, which should be used in a rough state, with thorough drainage in the pots. They are then removed to the greenhouse, placing them as near the glass as possible. All flower buds that make their appearance before February are pinched off, by which treatment the plant becomes bushy. If the leaves begin to curl, examine them very minutely; and if any green flies be detected, tobacco smoke must be applied immediately, as the pest is a great detriment to the production of well-grown and healthy specimens.

In the cultivation of the cineraria, for the second season, when they may be said to attain perfection, the first step to insure fine, healthy specimens, is to cut off all the blooming stems that may by any means make their appearance after the proper season for blooming: then give them a top dressing of light, rich compost, and when this is done, the plant should be removed from the greenhouse to a shaded situation in the open air, near to a north wall—in fact, never allowing them to become thoroughly dry. Here they may remain till the middle of autumn, when the previous winter's treatment should be repeated.

In summer, when the plants have thrown out plenty of new shoots, cuttings may be taken from those kinds most desirable to increase. In the preparation of the cuttings, all that is necessary to be done is to remove the lowermost pair of healthy leaves, then cutting it close to the joint with a sharp knife. The soil best adapted for the growth of the cuttings is a mixture of loam and leaf mould, in equal parts, adding a good portion of sharp sand: insert the cuttings in this compost, pressing it firmly round the base: give them a moderate sprinkling of water, and then place a hand-light or frame over them immediately, and they will not require much more care except shading from the sun. When water is supplied, it should be given in the evening, or in cloudy weather; and the glass may be taken off on fine dewy evenings, but must be replaced before the plants become dry in the morning.

The potting of these new plants should be performed as soon as it is known that roots are emitted, in the manner prescribed for seedlings, and their after-treatment may be assimilated in every respect.

The talented editor of the *Florist's Journal* has given the following as the criterion of a perfect cineraria: — "The plants should possess a neat, compact habit, amply filled with medium sized foliage, the bloom stems rising above the leaves, so as to exhibit the flowers free from obstruction, and in a conspicuous manner. The flowers should proceed from the centre or disc in a horizontal position, quite flat, and they should be of sufficient size to overlap each other, so as to leave no interstices between them. The more nearly they approach a perfectly unbroken circle on the margin, so much nigher are they to perfection: the proportion of the disc to that of the whole flower should be as one to three, and the colour or colours must be clearly defined, dense, and decided. Of course, novelty in this point is an acquisition, although it must not be purchased at the expense of either of the preceding properties. Size, though a necessary qualification, is considered of least importance, because a well-formed flower is every way preferable, and more pleasing to the discriminating eye of taste, than a huge misshapen object; still, one being only equal in other respects, and somewhat larger, would have the advantage of its predecessors."

It is computed that there are in England and Wales about 5,000,000 of oxen, 32,000,000 of sheep, and about 1,825,000 horses, one fifth of the latter of which ar kept for pleasure

THE STRAWBERRY.

ALTHOUGH strawberries should be properly included in the list of fruits, they are generally classed by gardeners amongst the permanent herbaceous crops in a kitchen garden. There is a great variety of named sorts grown in gardens, but they are mostly varieties or subvarieties of three species, viz., the PINE (*Fragaria grandiflora*), which is supposed to be originally from Surinam; the CHILI (*F. Chilensis*); and the SCARLET (*F. Virginiana*).

In preparing the ground for strawberries, it is necessary that it should be trenched or deeply dug, the roots of these plants penetrating to a great depth, and at the same time to be well manured. It is not generally known, but it is an ascertained fact, that most strawberries generate roots and strike them into the ground nearly two feet deep in the course of the season.

They may be planted in rows at from eighteen inches to two feet apart, according to their kinds, or in beds, each containing three rows, with alleys of three feet between the beds, and the rows eighteen inches apart in the beds, and the plants twelve or fifteen inches asunder in the line, according to their sorts. Choose the young plants from the runners of the preceding season, well rooted, and be careful not to mix the sorts whilst collecting the plants; indeed, every sort of strawberry, where it can conveniently be done, should be grown in separate beds, and at such a distance as will prevent their running into one another. Never plant old plants, but have the runners of the preceding season taken off when well rooted, and put into nursery beds, in order to give strength, when they will be in good condition to plant in spring. The duration of strawberry-beds depends on a variety of circumstances; sometimes they will last for ten, twelve, or more years, and, on the contrary, often only for two or three crops; and some cultivators only allow them to remain on the ground one year. The Rev. Thomas Garnier, of Stoke, one of the most successful cultivators of the strawberry, destroys all his beds early in August, as soon as the gatherings are over, and then proceeds to form new ones, by trenching and manuring them. He selects his plants from the strongest runners of the old rejected plants. If the weather should be particularly hot, and the surface of the ground much parched, he defers the operation of preparing and planting his beds till the ground be moistened with rain. Such is the simple mode of treatment which he has adopted for several successive years, and such has been his success that for several years he has produced a greater quantity of fruit on any one piece of ground than that of any other gardener in the county. Depth of soil is absolutely necessary for the strawberry; and, in fact, it is useless to plant many of the better kinds where the soil is not of a considerable depth. The pine, grove-end, and roseberry, succeed better than any other in stiff and shallow soils, and should be planted in an open situation, and not one too much shaded.

The Alpine strawberry, raised from seeds, differs from all others of the same family, inasmuch as it produces abundance of fruit the same season that it is sown. For this purpose it is sown in spring, on a bed of rich earth, and sometimes in pans or shallow boxes, where, in the latter way, it is forwarded by being placed in some of the forcing departments, not too warm, and when above ground gradually hardened to the open air. By such means it gets rather stronger than those reared on a bed of light earth out of doors. In July or August, they are in either case fit to plant out finally, which is generally done in a shaded situation, either behind a wall or hedge, in rich, moist soil, allowing the plants two feet apart, row from row, and one foot apart in the line. In this way abundant crops are obtained, which will continue bearing until destroyed by the frost. The season of the fine fruit can then be prolonged for a considerable time; forced roseberries, pines, or Alpines, being ripe in March, and the seedling Alpines in fruit, till the middle of November. In making plantations of this fruit, plenty of room should be allowed them, that they may not be destroyed in the process of watering or gathering them.

The hautbois generally thrives best on light soils, and can scarcely have too much manure, as it is not so likely to be thrown into a superfluity of leaves by manure as some of the others. There are various sorts of this species, all of them esteemed for their fine flavour; one variety has the parts of frutification so perfect, that it bears plentifully, being capable of self-fecundation; whilst some other varieties are so imperfect, that they contain the male parts in one flower, and the female in another. Still, the latter varieties are reckoned the finest flavoured fruit. In selecting young plants, therefore, of these sorts, for making out new plantations, particular caution must be observed that there be a proper proportion of male plants to the female; not having too many of the former, as they bear no fruit, and are more prone to run into leaves and runners than the others. The proportion ought to be one male to ten females.

It is a common observation that good hautboy strawberries are nearly lost. This supposition is, however, not correct. The hautboy which has male blossoms on one plant, and female on another, is frequently found in gardens; and as the sterile plants are more vigorous than the fertile ones, the unproductive runners become in time more numerous, and gain the ascendancy, and then the whole are considered as deteriorated. The males may be distinguished by their stamens being much longer, by their flowers not being so large as the females, and the receptacle of the fructification small and imperfect.

Strawberries require a larger portion of water than almost any other of our cultivated fruits to bring their crops to perfection. A considerable expense is incurred on this account by the strawberry growers in the vicinity of London and Edinburgh. They seldom have the opportunity of selecting a naturally moist situation for this fruit; and the formation of an artificial strawberry garden would be attended with too much expense, the quantity which they cultivate being so great.

The months of August and September are a good season for making young plantations of this fruit; and the plants intended to be placed out in the spring should then be planted into nursery beds, nine inches apart, as soon as the runners are sufficiently rooted.

COMPOSTS FOR PLANTS.

We beg leave to express our acknowledgments to Mr. J. B. Gorham, of Tonbridge, for the following useful and valuable list of compost for different flowers; a subject in which the majority of our readers are greatly interested, and a standard table for which as a matter of reference will be found of the greatest use to them. It is our intention to follow up the plan of Mr. Gorham, and to extend our list to all flowers now under cultivation, which we doubt not will meet with the fullest approbation of our subscribers.

Acacia, loam 1 part, peat 1 part, sand 1-half.

Anagallis, loam 2 parts, peat 1 part, vegetable mould 1-half, sand 1-4th.

Anemone, loam 1, hot-bed manure 1, vegetable mould 1, sand 1-3rd.

Annuals, loam 2, hot-bed manure 1.

Arctotis, loam 1, peat 1.

Asters, loam 1, turf-ash 1-6th, vegetable mould 1-6th.

Auriculas, loam 1, cowdung 1, vegetable mould 1, sand 1-4th.

Banksias, loam 1, peat 1, sand 1.

Bouvardias, loam 2, peat 1, hot-bed manure 1-half, vegetable mould 1-half, sand 1-4th.

Bulbs, Cape, loam 1, peat 1, vegetable mould 1, sand 1.

— Ditto, Dutch, loam 2, cowdung 1, vegetable mould 1-half, sand 2.

Brugmansia, loam 2, hot-bed manure 1, vegetable mould 1.

Begonias, loam 1, peat 1.

Calceolarias, loam 1, peat 1, hot-bed manure 1-4th.

Campanulas, loam 1, peat 1, hot-bed manure 1.

Camellias, loam 1, peat 1, hot-bed manure 1-half, vegetable mould 1-half, sand 1-half.

Carnations, pinks, and picotees, loam 2, hot-bed manure 1, sand 1-4th.

Chrysanthemums, loam 1, hot-bed manure 1-half.

Cistus, loam 1, peat 1.

Commelinas, loam 1, peat 1.

Correa speciosa, loam 1, peat 1, sand 1-4th.

Cyclamens, loam 1, peat 1, sand 1-4th.

Cyrilla pulchella, loam 1, peat 1, vegetable mould 1, sand 1-half.

Dahlias, loam 1, hot-bed manure 1, sand 1-3rd.

Daisies, loam 2, hot-bed manure 1, vegetable mould 1.

Eccremo carpus scabre, loam 2, hot-bed manure 1, vegetable mould 1.

Epacris, peat 2, sand 1-half.

Ericas, peat 2, sand 1.

Entaxias, loam 2, peat 1, vegetable mould 1-half, sand 1-4th.

Fuchsias, loam 2, peat 1, hot-bed manure 1, vegetable mould 1.

Gardenias, loam 1, peat 2, vegetable mould 2.

Gloxinias, loam 1, hot-bed manure 1, sand 1.

Greenhouse perennials, loam 2, peat 1, vegetable mould 1, sand 1.

Heliotropes, loam 1, peat 1, hot-bed manure 1, vegetable mould 1.

Hydrangeas, loam 2, hot-bed manure 1, vegetable mould 1.

Lobelia, loam 2, vegetable mould 1, sand 1.

Lophospermum scandens, loam 2, vegetable mould 1, sand 1.

Maurandia, loam 2, vegetable mould 1, sand 1-half.

Mesembryanthemums, loam 1, peat 1, sand 1.
Mignionette, loam 1, vegetable mould 1, sand 1.
Mimulas, loam 2, hot-bed manure 1, vegetable mould 1, sand 1-half.
Myrtles, hot-bed dung rotted to mould.
Nicrembergias, loam 2, vegetable mould 1, sand 1-half.
Oxalis, loam 1, peat 2, hot-bed manure 2.
Oranges, loam 4, vegetable mould 1.
Pansies, loam 2, peat 1, hot-bed manure 1.
Pelargoniums, loam 1, peat 1, hot-bed manure 1, vegetable mould 1.
Pimelias, peat 2, sand 1.
Polyanthuses, loam 1, hot-bet manure 1-8th, vegetable mould 1-8th, sand 1-8th.
Primula sinensis, loam 1-half, peat 2-3rds, vegetable mould 1, sand 1-3rd.
— Ditto, common, loam 1, peat 1, vegetable mould 1.
Ranunculuses, loam 1, hot-bed manure 1, vegetable mould 1, sand 1-3rd.
Roses, climbers, loam 1, hot-bed manure 1.
— Ditto, noisette, loam 1, hot-bed manure 1.
— Ditto, perpetual, loam 1, hot-bed manure 1.
— Ditto, odorata, loam 1, peat 1, hot-bed manure 1-half, vegetable mould 1-half.
— Ditto, standard, loam 1, hot-bed manure 1.
Salpiglossises, loam 1, vegetable mould 1, sand 1-3rd.
Salvias, loam 1, peat 1, hot-bed manure 1.
Senecio elegans, loam 1, vegetable mould 1.
Succulent plants, 2 turfy, and 1 part lime rubbish from old buildings.
Tuberoses, loam 2, hot-bed manure 2, sand 1-4th.
Tulips in pots, loam 2, cowdung 1, vegetable mould 1-half, sand 2.
— Ditto in borders, loam 3, hot-bed manure 1, vegetable mould 1, sand 1-half.
Verbenas, loam 1, peat 1, hot-bed manure 1.
Violets, loam 1, hot-bed manure 1, vegetable mould 1.

THE AURICULA.

The Auricula has long been a favourite flower in the English gardens, and may be considered as one of the principal ones which are known by florists under the appellation of *florist's flowers*. It is of very ancient date in this country, and was originally known by the name of *Bearscars*. In French it is called *Oreille d'ours*; and in German *Barenohrlain*. It is a native of Switzerland, although it must be remarked that the flowers in the Swiss Alps are generally of a clear bright yellow; but it is a species which is seldom cultivated in this country. The different varieties cultivated here are the effect of a high state of cultivation, but they are divided into four kinds, very distinct from each other, viz., the green-edged, the gray-edged, the white-edged, and the selfs—the latter, although more beautiful than the powdered kinds, are not held in high estimation by florists. In the auricula, the great object of the grower is to obtain large clusters or *trusses* of flowers, and clear, well-defined colours; and the value of a variety is determined by its excellence in these respects. All the kinds have been produced by sowing seeds, but there is not any flower which produces more seldom a new variety of merit; and it often happens that out of some thousand seedlings, not one is sufficiently remarkable to be worth preserving.

The propagation of the auricula takes place by its lateral effects, which are produced more or less abundantly according to the healthiness of the individual or of the variety. In the spring, when the plant begins to grow, these offsets will readily form roots, for it is then that their vital powers are in their greatest activity. It is at that period, therefore, that the propagation of the auricula should take place; the offset should be carefully cut from the mother plant, potted in light rich earth, and placed under a hand glass, until they have established themselves. As soon as that has taken place, the hand-glasses should be lifted up, and air freely admitted to the young plants, which will still require to be shaded and kept slightly raised.

New varieties of the auricula are procured exclusively by sowing the seed, and if this was judiciously saved, a large number of all seedlings would possess sufficient beauty to deserve cultivation. In the words of one of the most successful of its cultivators, "The auricula is to be bred as high as a race horse, by a corresponding attention to pedigree." So little attention, however, is paid to the true principles of high-breeding, that many persons fail to procure a single good variety from some thousand seedlings. In a German work, entitled, *Rauft's Bemerkungen uber die cultur der Aurikol*, (Rauft's Observations on the Cultivation of the Auricula,) we find the following maxims on the rearing of flowers from seeds, which are particularly deserving of attention; not only in regard to the auricula, but to all other flowers:—

"All plants that have been obtained by artificial means, have a tendency to return to that wild state from which they have been reclaimed.

"This tendency is particularly strong when they have been raised from seed, and will be great in proportion to the deviation of the parent plant from the most highly cultivated state.

"But the tendency must be counteracted by continually selecting the finest and most highly-bred flowers to yield seeds.

"The latter, however, are open to the influence of other and inferior varieties, provided they be placed near them at the flowering season.

"Especial care should, therefore, be taken not only to select for yielding seed the most beautiful flowers of the most perfect varieties, but also to prevent the possibility of winds or insects conveying among them the pollen of inferior specimens."

The seeds of the auriculas should be sown in March or April, either in a warm sheltered spot, or in shallow boxes, or pots, filled with light rich mould. Boxes or pots are to be preferred, as being more readily removed from one situation to another, as occasion may require. The surface should be made perfectly smooth and level, on which the seeds should be sown tolerably thick, and covered about a quarter of an inch with very light, finely-sifted mould. Previously to filling the boxes or pots with mould, it is of importance they should be well-drained at bottom, to allow of all superfluous moisture passing freely off. When sown, they should be placed in a situation perfectly sheltered from the cold winds, but entirely open; they may remain till the beginning of May, when it will be necessary to remove them to a more shady place.

Auriculas come into bloom in the month of April, and will then require the greatest attention, so that they may not be injured by dashing rains, or cutting winds; for this purpose they should be protected in frames, covered with glasses occasionally, and placed so that they may not be the least exposed to the rays of the sun, or if such a situation cannot be conveniently met with, they may be shaded with mats or canvas, from eight or nine in the morning, till three or four in the afternoon, in sunny days, and at all times carefully protected from much wet, as the farinaceous matter upon the petals, which add so much to the beauty of the flower, will be injured if not washed off by rain.

When it is required to have the more curious or choice varieties blow in the best perfection, the pots should, according as the flowers begin to open, be immediately placed on a stage, or where the flowers may be protected. The stand, or stage, should have from three to five or six ranges of shelves, about six inches wide, rising theatrically one above another, from the front, having the back generally placed against a shady wall, pale or other building; it must be constantly covered at top, water-tight, sloping to the back part, but the front, or two ends, must only be covered occasionally, by having some canvas or mats fastened to the front, or two ends, by way of curtain, so contrived that it may be readily let down, and drawn up at pleasure, which, when the air is very sharp, or in high winds, or driving rains, must be let down to shelter the flowers, but when the weather is mild and calm, let the front be constantly open. . Or this curtain may be used to shade the flowers from the sun, where it has access, in the heat of day, observing, however, not to let the screen remain longer than necessary for the defence of the flowers.

Watering must likewise be observed during the time the plants are on the stage; they should, therefore, be examined at least once every day, to see when water is wanted, and such pots as stand in need of it should be immediately supplied. In doing this, let no water fall on the flowers, for that would wash off the farinaceous bloom, and greatly deface their beauty.

It has been a common practice to shift auriculas, and take off the slips immediately after flowering, the reasons for which are, their remaining too long in a state of inactivity during the heat of summer, the season in which of all others they are most likely to contract a loss of verdure. To guard against which, it is proper to remove the plants into a cool, shaded situation till the latter end of August, when they should be fresh potted.

THE CRITERION OF A FINE AURICULA.

An auricula to be of the first rank in the estimation of the florist, should have the flower-stem sufficiently tall to elevate the truss of bloom a little above the foliage, so that it may be seen to greater advantage; it should, at the same time, be elastic, upright, and strong; the foot-stalks of the flowers should be also strong, elastic, and of a length corresponding to the number and size of the pips, which should not be less than seven in number.

The pip is composed of the tub, with its anthers and stamens, the eye, and the outer circle, containing the ground colour with its edge, or margin. These three should be all well-proportioned, which will be the case, if the diameter of the tub be one part, the edge three parts, and the whole pip six, or nearly so. It is the opinion of amateurs, that the pip should be round, but as this seldom happens, they content themselves when they nearly exhibit that figure. The summits of the stamens ought to be large, bold, and fill the tub well; the latter should terminate rather above the eye, which should be smooth, round, and without cracks; of a fine, white colour, and distinct from the ground-colour; this should be equal on every side of the eye, whether it be in one uniform circle or in bright patches, and should be bold, and rich; perfectly distinct at the eye, and broken only at the outward part of the edging. A dark, or black purple, or bright coffee-colour, contrasts best with the eye; a bright pink, or rich, blue is pleasing, but that which would be the most desirable on this point would be a glowing scarlet, or dark crimson, if edged with bright green, but this is seldom expected; the principal cause of the variegation of this flower, is the green margin, and in proportion to the size of the flower, it should be about one-half. The dark grounds of these flowers are for the most part covered, less or more, with a white, mealy, or farinaceous powder, which is considered by florists as a natural provision to protect the flowers from the scorhing effects of the rays of the sun; white, of all colours, being the greatest non-conductor of heat.

ON THE FORMATION OF PITS FOR THE PROTECTION OF CULINARY VEGETABLES.

Amongst the many improvements in modern gardening, few are of greater utility than the erection of temporary pits for the protection of culinary vegetables during winter; and notwithstanding that this is within the reach of almost every one possessing a garden, however small, it is singular that so great an advantage should be so generally disregarded. The season of many of our most delicate vegetables might be considerably prolonged by the adoption of pits constructed of turf, mud, old boarding, &c., and protected during winter, by placing over them such spare lights as are not in immediate use; thick canvas, straw, Russian, or reed mats; shutters formed of thin feather-edged boards, &c. Such pits may be more or less formed below the surface of the ground, as the dryness of the situation will admit of; as the less they are elevated above the surface, the better they will resist severe frosts. The most economical structures of this sort are pits built of turf, of lengths corresponding to the quantity of vegetables intended to be protected, and of breadth not exceeding six or seven feet; their depth will depend upon the kinds of vegetables intended to be protected; thus pits for brocoli, cauliflowers, celery, &c., should not be less than three feet in depth, which will admit of one foot of dry sandy earth being laid on the bottom, in which the roots, taken up with balls of earth attached to them, are to be planted, or rather laid, the heads of the plants being laid obliquely. Pits for endive, lettuce, and other salads need not be more than two feet in depth; one foot, as above, for dry light mould, wherein to plant them, and the same space above that for the tops of the plants. The situation of pits should be exposed to the sun and air, and on a bottom either naturally or artificially dry. Their chief management consists in choosing a dry day for placing the plants in them, removing all superfluous leaves, particularly such as are broken or beginning to decay; carefully attending to the free admission of air every dry day, the exclusion of rain, and the speedy removal of damp, when such appears, the exclusion of frost, by the means noticed above, and occasionally, during the severity of the winter, by an extra covering of straw, fern, spruce branches, &c. As the produce thus protected is cut and gathered for use, all roots, stems, or leaves that remain, should be immediately removed, for if left, they would produce a tendency to decay in the remainder.

It is difficult to say to what extent this system of pit-culture might be carried, not only by prolonging the season of autumnal vegetables, but also by accelerating those of spring. Early carrots, turnips, cauliflowers, potatoes, salads of all kinds, French beans, &c., might be produced much earlier than by the usual modes; and celery, brocoli, spinach, winter salads, cauliflowers, &c., might be kept for use during the whole winter and the early spring months.

On the continent, where the winters are much more severe than with us, a variety of contrivances is had recourse to, and vegetables are to be had there in great perfection, not only in the gardens of the wealthy, but even the public markets are supplied with a profusion that is truly astonishing. In Holland and Belgium, immense cellars are formed under the houses; and in Germany, caves are cut out of the rocks, in which they store their winter supply of vegetables, and thus bid defiance to the most inclement frosts. In turf-pits, in dry sandy earth, cabbages, endive, celery.

cauliflowers, and many other vegetables, may also be preserved by being entirely covered, their roots only remaining above the surface. Before covering them, the whole plant should be as dry as possible. By the adoption of this latter method the use of glass coverings is unnecessary; the whole surface may be covered with dry fern, and thatched over so as to exclude the rain.

THE VINTAGE IN TUSCANY.

Is there a word more rich to the untravelled Englishman in picturesque significance and poetical associations than the Vintage? All that the bright south has of glowing colouring, harmonious forms, teeming abundance, and Saturnian felicity, mixed up in the imagination with certain vague visions of bright black eyes and bewitching ankles —all this and more goes to the making up of the Englishman's notion of the vintage. Alas! that it should be needful to dissipate such charming illusions. And yet it is well to warn those who cherish these *coleur-de-rose* imaginings, and who would fain shun a disagreeable *desenchantement*, that they will do wisely in continuing to receive their impressions of Italian ruralities from the representations of our theatres and the description of Mrs. Radcliffe. To those inquirers, however, of sterner mould, who would find truth, be it ever so disagreeable when found, it must be told, that a Devonshire harvesting is twice as pretty, and a Kentish hop-picking thrice as pretty a scene as any "vindemia" that the vineyards of Italy can show. The vine, indeed, as grown in Italy—especially when the fruit is ripe and the leaves begin to be tinted with crimson and yellow—is an exceedingly pretty object, rich in colouring and elegant in its forms. Nothing but the most obsolete and backward agriculture, however, preserves these beauties. If good wine and pretty crops be the object in view, the vine should be grown as in France—a low dwarf plant, closely pruned, and raised only two or three feet from the ground; and than such a vineyard nothing can be so ugly. Classic Italy, however, still cultivates her vines as she did when the Georgics were written—"marries" them most becomingly and picturesquely to elms or mulberries, &c., and makes of them lovely festoons and very sour wine. Again, it must be admitted that a yoke of dove-coloured oxen, with the heavy unwieldy tumbril, is a more picturesque object than an English waggon and a team of horses. Occasionally, too, may be seen bearing not ungracefully a blushing burden of huge bunches, a figure, male or female, who might have sat for a model to Leopold Robert.

But despite all this, the process of gathering the vintage is anything but a pleasant sight. In one of the heavy tumbrils I have mentioned are placed some twelve or fifteen large pails, some three feet deep, and a foot or so in diameter. Into these are thrown pell-mell the bunches of fruit, ripe and unripe, clean and dirty, stalks and all, white and red indiscriminately The cart thus laden, the fifteen pales of unsightly, dirty-looking slush are driven to the "fattoria," there to be emptied into vats, which appear, both to nose and eye, never to have been cleansed since they were made. In performing this operation, much is, of course, spilt over the men employed, over the cart, over the ground; and nothing can look less agreeable than the effect thus produced. Sometimes one large tub occupies the whole tumbril, the contents of which, on reaching the "fattoria," have to be laded out with buckets. Often the contents of the vat trodden in one place—a most unsightly process—have to be transported in huge barrels, like water-carts, to another place, to undergo fermentation. And then the thick, muddy stream, laden with filth and impurities of all sorts, which is seen when these barrels discharge their cargo, is as little calculated to give one a pleasing idea of the "ruby wine" which is to be the result of all this filthy squash, as can well be imagined. Add to this an exceedingly unpleasant smell in and about the buildings in which any part of the wine-making process takes place, and the constant recurrence of rotting heaps of the refuse matter of the pressed grape under every wall and hedge in the neighbourhood of each "fattoria,"—and the notions connected with the so be-poetised vintage will be easily understood to be very unpleasant in the minds of those acquainted with its sights and smells.

CAUTION TO THE PURCHASERS OF GUANO.—A gentleman walking lately on the beach in the vicinity of Warwick, observed a man busily engaged with a pickaxe, raising a material from the lower part of the cliff, and on asking the man his employment, he was told that he was raising stones for manuring. This rather puzzled the inquirer, who became more minute in his inquiries. The man observed—"These which look like stones are crystalised fish, and although very hard now, will, when put through a mill, crumble to powder. My master ships a great quantity of it to London, there to be ground, and then used in the guano to give it weight."

CULTURE OF CAPE BULBS.

Pot the roots, or plant them in a border in front of a stove or greenhouse, or other sheltered place, during the month of October. Let the soil be composed of equal parts of leaf mould, sandy loam, and peat, well mixed.

If planted in pots, set them in a cold frame, and protect them from severe weather, till the pots are pretty well filled with roots, then remove them to the greenhouse or room where they are intended to flower.

When potted, they must be watered very sparingly, until they have produced leaves, and begin to show their flower stems, and after flowering, when the leaves are dead, keep the roots perfectly dry in the pots. If planted in a border or frame, they must be completely preserved from rain, snow, or frost, particularly during their dormant state; in the former case, a good thickness of litter will answer the purpose, and in the latter, the frames may be covered with lights.

The usual flowering season is April, May, and June; but some species flowering somewhat earlier, others later, the plants at that time require to stand in light airy places, and should receive a good supply of water.

It is not well to take up the bulbs in less than two or three years, at which time all the offsets should be taken off; but such as are in pots must be invariably repotted every October. No person, who cultivates Cape bulbs, should be without Streptanthera cuprea, and elegans, Sparaxis lineata, grandiflora, and tricolor, Ixia Heleni, flexuosa and viridiflora, Trichonema, rosea, and some others.

Singular Remedy for Weevils in Wheat.—Mons. de Brosses, First President of the Board of Agriculture in France, finding that the insects called weevils had got amongst some wheat, tried almost every method to get rid of them, but in vain. At length he was advised to get some live lobsters, which he threw on the wheat that was infected, and in four hours' time the weevils came out from all parts, dispersing themselves over the walls in such numbers, that in many places they were quite black with them, and by this means they were all easily destroyed. The smell of lobsters, particularly if left till they stink, always proves fatal to these insects, and yet will not in the least affect the corn. This remedy should be used as soon as the weevils appear, or begin to make their nests.

Mode of Growing Apples in Gozo.—"The steep declivities of the sides of the hills, presented a succession of terraces, which, rising rapidly one above another, all on a very small scale, gave an idea of the seats of an immense amphitheatre, and the curved lines of the opposite hills strengthened the idea. These little terraces were prettily planted with fruit-trees, especially the apple and vine intermixed. They were well-pruned and kept low; few, even of the apple trees, were larger than gooseberry bushes. In full bloom at the time, and covering so considerable an extent of ground, they made a singular appearance, reminding me of home, and at the same time assuring me of being abroad. Perhaps this mode of cultivating the apple (probably borrowed from the mode of cultivating the vine) might be employed in many situations in England and Scotland, with advantage, especially where the winds are strong, and the exposure bleak and cold. Kept low, and so near the ground, the trees would be better sheltered, and the fruit would ripen sooner and more perfectly."—*Davy's Notes on the Inonian Islands and Malta.*

Raising Rhubarb Plants from Eyes or Buds.—The following may, perhaps, be acceptable to your readers:—Having found myself disappointed for many years back in raising the rhubarb plant from seed in the open borders of my garden, I was induced to try what success I should have by separating some of the eyes or buds, which shoot out in the upper part of the root, together with a small part of the root itself, with some of the fibres to it, many of which may be seen both in the spring and autumn, on plants of three or four years. My success was equal to my expectation, and all the rhubarb plants which I now grow are raised after the above mentioned method. I have just separated twenty eyes or buds from a plant of four years' growth, which plant was itself raised the same way. The old plant is not at all injured by taking the eyes from it, but is suffered to grow till it be seven or eight years old, or sometimes longer, as the quality of the rhubarb, as well as the size of the root, will be much increased, if it be on the ground till it be ten years old. By the above method I save a year in the growth of the plant. It is not in such danger of being eaten by vermin as seed, nor so uncertain of its growing: it is not so tender, neither does it need transplanting, or any other care than keeping the ground clear of weeds. I have not found any difference in the size of the roots thus raised from those which are raised from seed.—T. Hayes, Hampstead.

MARCH.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

THE FLOWER GARDEN.

(FIRST WEEK.)

AURICULAS.—We must again remind our readers to pay particular attention to the auriculas and polyanthuses, the latter requiring the same treatment; some few may be showing their trusses, in the centres of the hearts of the plants. If the foliage be of close and upright growth, water is apt to lodge in the centres, covering the buds; this must not be allowed to remain, as it will prove injurious. In such cases, the water should be blown out or absorbed with a small piece of sponge, that the buds may dry. If the green fly is at all troublesome, sprinkle a little dry silver sand over them, and let it remain a few minutes, or until the insects, being annoyed by the weight, loosen their hold and begin to move; then, by blowing sharply, they may be driven out with the sand; be sure to close your eyes during the operation. A liberal supply of moisture must be continued, and still allow them to receive moderate showers falling with a southerly or westerly wind; expose the plants as much as possible while the weather is fine overhead, and the atmosphere not frosty; but cover them regularly and carefully at night, with two or more mats, for the sudden changes that take place at this season will require your regular attention to this; and however promising the weather may be, it ought not to be omitted. Look over the offsets taken at the beginning of the month, clear them of insects and decayed foliage, and give water where necessary; a moderate moisture should be kept up; by no means saturate them, or they will be liable to decay.

CARNATIONS AND PICOTEES.—Go over the frames, selecting the most healthy and promising plants of those varieties you intend cultivating for exhibition. Clean them of the dead, and trim off decaying foliage; slightly move the surface of the soil, and place the plants by themselves ready for potting. Ascertain what deficiences there are, and if any, replenish them as quickly as possible, for it is well to be in good time with your application, and insure good plants. The large pots should be got in readiness; if old ones are to be used, they should be cleansed; either wash them, or have them brushed inside and out, with a wisp of bass, that they may be fit to receive the plants. Provide a good supply of potshreds for drainage, unless you intend using the coarse screenings from your compost for the purpose. Attend to the watering; this must not be neglected; a day's rain will not hurt them at this time. Give plenty of air, protecting them at all times from severe frosts, storms, and drying easterly winds.

DAHLIAS.—Attend to the directions given last month. The heat must be kept up; fresh linings will be required if you find a decline in the temperature.

TULIPS are now considerably above the surface, and will require close attention to be paid to the night covering, and protection from heavy storms of hail and rain.

ROSES.—Rose trees of most sorts may still be removed. Those that are planted this month, will produce flowers the same year; but the sooner they are planted the better they will take root, and the stronger they will flower. By transplanting them in April, and beginning of May, giving plenty of water till fresh rooted, a bloom will be obtained in July, August, and September. Tree roses, that is, roses trained up like standard trees, are now of the ornaments of the flower garden. In some cases, a leading shoot is trained to a stake, the plant being divested of all branches; at four or five feet high, it is topped, and there allowed to branch out into a head, which is usually kept pruned in closely; another method is, planting a straight single shoot of the wild dog rose, and thereon bud the desired sort, or upon young shoots at its top on the following summer. An endless variety of roses are now in our collections, chiefly obtained by the indefatigable exertions of the French nurserymen. Messrs. Loddiges, of Hackney, enumerate above 1400 sorts and varieties in their sale catalogue.

TRANSPLANTING PERENNIAL PLANTS.—Vacancies in any of the borders, beds, or other parts of the garden, may now be filled up with different kinds of perennial and biennial flower plants, any time during this month. In planting the different kinds, dispose them variedly, the larger sorts more or less back, the smaller towards the front and middle; give water at first planting, and afterwards in dry weather, till the plants are rooted, by which they will grow freshly, and flower the same year.

PLANTING DECIDUOUS FLOWERING SHRUBS.—Where deciduous flowering shrubs or trees are wanted, they may now be brought in and planted, for most sorts will yet succeed, such as the althæa frutex, spiræas, syringas, roses, Guelder rose, honeysuckles, arbor judæ, jessamines, common lilac, Persian lilac, mezereons, laburnums, hypericum frutex, bladder-nut, sumach, candleberry myrtle, dog-wood, Virginian dog-wood, double flowering clary, dwarf almond, and all other kinds of hardy flowering shrubs.

HARDY ANNUAL FLOWERS.—Sow in borders and other compartments, pots, &c., the seeds of hardy annuals, such as large and dwarf annual sunflower, oriental mallow, lavatera, persicaria, Venice mallow, larkspur, flos Adonis, sweet sultan, large rose, and blue and yellow lupins, convolvulus major, sweet scented peas, Tangier peas, and nasturtiums, the nigella, purple and white candytuft, virgin stock, Venus' looking-glass, Venus' navel wort, double poppy, lobel's catchfly, dwarf lychnis, and convolvulus minor, ten weeks' stocks, and mignonette, and various others.

CARNATIONS.—The carnations which were raised from layers last year, and which are not yet planted into the large pots, borders, &c., where it is intended they should flower, should be planted therein the beginning of this month. Where any best carnations were planted in small pots last autumn, to place under shelter in winter, they should now, if not done last month, be transplanted, with the ball of earth about their roots, into large pots, borders, &c., there to remain for flowering. Let the plants be cleared from dead leaves, then take some of the earth out of the pots, as near to their roots as possible, without disturbing them; then let the pots be filled up with fresh mould, laying it close round the plants, after which water them. A fine light compost, enriched to a competent degree, may be prepared in the following manner: For the roses, have recourse to a loam of a light sandy nature, bring away a quantity of this, taking the top spit with the turf; in order to rot the grass and mellow the whole, let it lie for a year in a heap, being frequently turned over, after which period mix with it, the proportion of a third part, the dung from old hotbeds or rotten cowdung, and a little sea sand. Let this compound lie in a heap for three or six months longer.

HYACINTHS.—Hyacinths will now begin to advance apace; if the flower stems be tall, and the spikes of the flowers large, and the petals double, some sticks should be procured to support them, for the large double flowers being heavy, the stalk alone is not able to bear them up. If they be planted regularly in a bed, green coloured lines should be fixed from end to end, close to the rank of stems, and those tied thereto with green worsted.

SOWING AURICULA AND POLYANTHUS SEED.—The seeds of both of these beautiful flowers may now be sown. If of the finer sorts of auriculas, sow in a box of light, rich earth, covering very lightly, and place it in a warm sheltered spot, attending to it with water in dry weather, and defending it from heavy rains. The reason for sowing in a box or boxes is, that they may be shifted rom place to place as the season advances, for after they are up, they may be more freely exposed to the weather. Till then, and when they have got a few rough leaves, they must be shaded from the full day sun. Indeed, these plants naturally like the shade, and should never be placed in a spot fully exposed to the sun. If they have the morning and evening sun only, they will thrive the better. These plants will also do very well if sown on a light, rich border, at the bottom of a wall or hedge, having a north-east or north-west aspect. The seeds should be sown thinly, and covered lightly, and as the season advances, they should be moderately supplied with water. They will be fit to prick out in June, and be transplanted in August, and in that case will get established before winter. Those who are very curious in fine auriculas sow in boxes, and place them in a slight hotbed for a few weeks, or until the plants rise, and then move them to a warm but shaded situation, afterwards taking care of them as above directed. By this means the plants are considerably forwarded, and acquire full strength to stand the winter.

CARE OF CHOICE BULBS.—About the first of this month, let the covering of rotten dung or saw-dust be cleared from off the beds of choice bulbs, afterwards carefully stirring the surface about them with a small wooden spatula or wedge, and dressing all smooth and neat about the alleys with the rake. If the season be early, many of the hyacinths and polyanthus-narcissuses will be far advanced, and should be supported to neat small sticks or wires painted green, in order to prevent them being injured by high winds, tying them loosely with bits of green worsted. The same should be done with the rare sorts of tulips, jonquils, narcissuses, &c., as they advance. Those who are anxious about hyacinths and tulips, and wish to have them flower in perfection, defend them from bad weather or too much wet at this season, by placing mats or canvas covers over them, suspended upon hoops; also afterwards, in order to prolong the season of their beauty, they shade them from the mid-day sun, exposing them to his rays in clear weather only mornings and evenings, or in cloudy weather the whole day. There are different ways of constructing this kind of covering or awning. Strong hoops, or poles of ash, or chestnut, or willow, are generally stretched over the beds at the distance of thirty inches from each other, their ends being firmly fixed into the earth; over these double garden mats are spread, and their edges are kept down by stones or bricks, and sometimes by heavy deals, or by cuts of small trees. But people who are nice in this matter use oil-cloth for defending from heavy rains, and thin canvas or sheetings for screens against winds and the sun; and instead of coarse hoops, have a row of stakes driven into the ground on each side of the bed, at the distance of thirty inches from one another, over which they stretch neat laths, tying the edges of the canvas to the stakes at bottom.

Pinks.—The pinks propagated last year should now be planted out. The fine flowering kinds are generally planted in a bed or border by themselves, and protected from heavy rains, winds, &c., by occasionally covering with mats, canvas, &c., supported by hooped rods placed over the beds. The pink, although of British origin, as well as the carnation, is much less tender, and less choice in its situation and soil. The following is an excellent compost for the pink: A good, fresh, loamy soil, dug and comminuted about two feet deep, and manured with a stratum of cow-dung, two years old, mixed with an equal proportion of earth; this stratum to be about six inches thick, and placed about five or six inches below the surface.

Planting Ranunculuses and Anemones.—The planting of these roots should now be finished as early in the month as possible; and if the ground be dry, let them be occasionally supplied with water in a moderate degree.

SECOND WEEK.

Auriculas must be carefully protected from storms of hail and heavy rains, and be kept well supplied with moisture; for their further management, see last number. The seedlings sown at the proper season, January, will now be fit to transplant; this must be done with care; prepare either pots or boxes, with plenty of drainage, filled within two inches of the top with any good, sweet soil; on this should be placed (finely sifted) a soft and cool compost for the roots of the young plants to work in, composed of three parts leaf mould, one of well decomposed cow or horse manure, and one of light sandy loam, with sufficient silver sand to keep the soil open; by the time they have rooted through this, they will require shifting again. Seedling polyanthuses drawn at the same time, will also require transplanting, and if raised from first rate varieties, would recommend them to be treated after the manner of the auriculas, with this exception, that they be planted an inch apart, and about the end of April, or beginning of May, be finally planted into beds to bloom.

Carnations and Picotees may be potted the first open weather that offers. Everything necessary for the purpose being in readiness, proceed at once with the business, for the plants are injured by delay.

Pansies.—Take advantage as soon as the soil in the beds is dry, and top-dress them, fresh stirring and cleaning the surface, that the manure may wash down to the roots. A layer of two inches of good fat dung will generally improve the flowering, and also assist to protect them from the harsh easterly winds, generally too prevalent and destructive at this time of the year. The plants are now growing, and, consequently, more tender; some protection should be given to the weakly growing varieties, either singly, or by erecting boarding the full length of the bed, on the eastern side, about twelve or eighteen inches in height. This will greatly break the force of the wind, and defend the plants well.

Dahlias.—Any time this month dahlia roots may be planted in the open ground, taking care to place them four inches below the surface, and they will be safely protected.

from the frost; if an increased number be wanted, select a convenient spot for the purpose, that can be spared till the month of May; at this time the roots may be taken up and parted into as many as there are stems, provided each have a tuber or newly-formed root attached, and may then be planted where intended they should flower.

Hardy Annual and Perennial Flowers.—All kinds of hardy annual and perennial flowers may now be sown. To those of the former previously named may be added, antirrhinum, china asters, chrysanthemums, French and African marigolds, hollyhocks, India pink, mallows, marvel of Peru, mignonette, sweet scabious, sweet sultan, stock gilliflowers, sunflowers, tall and dwarf, Venus' looking-glass, violets, &c., and of the latter may be added, campanulas, carnations, columbines, cyclamen, foxgloves, French honeysuckle, gentians, globularia, pinks, rockets, tree primrose, Veronica, and wallflowers. The annuals may generally be sown in patches about the borders where they are to remain, and the perennials, and such of the annuals as are intended for transplanting, may be sown either so or in beds, keeping each kind distinct, covering lightly, and watering them if the weather prove dry.

Carnations in Pots.—Carnations raised from layers and pipings last season should now be potted off into full sized pots, in which they are to perfect their flowers. These pots should not be less than one foot in diameter at top. The roots of these plants are subject to injury from excessive damp; therefore, the pots should be well drained for them, and a sufficient quantity of mould prepared for potting them. Like all other plants which come under the above denomination, or which have attracted the attention of the florist, many soils have been recommended. We will subjoin the soils used by two respectable florists, as they themselves published them, and as they appear rational and free of that quackery which is so much practised in compositions for florists' flowers.—Mr. Hogg, a first rate cultivator of the carnation, gives the following as his practice. Three barrows of loam, one and-a-half ditto of garden mould, one ditto of horse-dung, one ditto of coarse sand, let these be mixed or thrown together in a heap or ridge, and turned two or three times in the winter, particularly in frosty weather, that it may be well incorporated. On a dry day, towards the end of November, I take a barrow of fresh lime, which, as soon as it is slacked, I strew over it whilst busy in turning the heap, this accelerates the rotting of the fibrous particles in the loam, lightens the soil, and destroys the grubs, worms, and slugs. Lime is too well known as a manure, to say anything further in its praise here. If there has been much rain during the winter, so that the strength of the compost be reduced, and the salt washed from it, I take about seven pounds of damaged salt, and add them to it, either dissolved in water or strewed over it with the hand. This, from an experiment of three years, I have found to be attended with the most beneficial effects upon the future health and vigour of the plants. During very heavy rains, many of the florists cover the compost with tarpaulin or double mats, in order to prevent the nitrous particles from being washed out. This is an excellent precaution. If any objection be started that the quantity of dung is too great in proportion to the loam, I answer, that such an objection might be well founded if the compost were to be used immediately on its being mixed together; but as it has to lie six months before it is used, I am decidedly of opinion that the quantity is not more than is necessary, in order to ensure a luxuriant growth, and generous bloom.—Mr. Maddock, an equally successful and well-known florist, gives the following as his practice:—One-half rotten horse dung, one year old, or that which has been used for hotbeds for cucumbers, melons, &c., one-third sound loamy earth, one-sixth coarse sea or river sand; these ingredients are to be mixed together in autumn, laid in a heap about two feet thick in an open exposure, and turned two or three times during winter; or otherwise, the dung alone, after being used as a hotbed, may be thrown together in a heap in a conical form, in order to rot more perfectly, and as its surface freezes in winter, it should be pared off, and laid on one side till the whole mass has been completely frozen throughout; this may be repeated as often as the season permits, and it will be completely fit for use the following spring. The earth and sand may be added to it in March, when wanted to fresh pot the plants for bloom. The whole should be well mixed and incorporated, and passed through a coarse screen or sieve, in order to reduce its parts, and take out stones, or any other extraneous substances which it may contain. In country places where the air is more pure, experience has pointed out the propriety of using less dung, and more loam, the proportions of which for such situations may be reversed, viz., one-half loamy earth, and one third dung, with the sand as before specified. The preparation of the compost in other respects is to be exactly the same in all situations.

Ranunculuses and Anemones. — For the early plants, take off the common hoops from the beds of the ranunculuses and anemones, and fix in their place some that are higher. The flower buds will soon begin to show themselves, and they require protection and air. The frosts will most likely be too severe to allow of the plants being fully exposed; but if they be drawn under a low covering, their stalks will be weak, and their colours faint. Therefore, let the hoops be high, and the covering they are intended to support never be used but when the inclemency of the weather demands it; if the weather be not actually frosty, the covering should never be applied.

Sowing Tender Annuals. — If these were not sown as directed last month, let them now be sown without delay. Plants now raised from seed will bloom beautifully in June, July, &c., till the end of the season, and will come in usefully for decorating the greenhouse, when the plants are in their summer station, as well as the conservatory and drawing-room during these months.

Propagating Various Double Flowers. — Double flowers are the pride of the florist, but are regarded by the botanist as vegetable monsters, produced by luxuriance of nourishment; many of them, however, have long been esteemed flower garden plants, and as the chance of procuring them from seed is so uncertain, the gardener has frequently recourse to a propagation of the variety by cuttings in order to increase or continue his stock. Most herbaceous plants, with double flowers, are readily propagated by cuttings, whether they be annuals, biennials, or perennials, and the season for propagating them by such means is the present one, before the flower stalks can be far advanced, and in autumn before the flowers are beginning to fade. Some, however, are not so readily propogated as others; of these the double rocket, Hesperis matronales, furnishes an example. Of this plant there are two varieties, differing in the colour of their flowers, the one being white and the other purple. The following are excellent directions for its cultivation. After the flower is beginning to fade, cut down the stalks and cut them into ordinary lengths of cuttings; next cut off the leaves and smoothen the ends, then make three slits with a knife in the bark or rind longitudinally, so as to separate or raise the bark for half an inch in length. When the cutting is inserted in the ground, the loose bark naturally curls up, and it is from this bark that the young roots proceed. The cuttings may be put into flower-pots, for the more readily protecting them during winter; or they may be planted in the natural earth, provided that it be light and fresh; covering them with a hand-glass will forward their rooting, and placing them on a slight hotbed will forward their growth considerably. Annual plants, to a certain extent, may be propagated on the same principle, and their existence prolonged for several years, by a somewhat similar process. There are, however, some double flowers which are not capable of being increased this way; of such are those with bulbous and tuberous roots, but as they increase so readily by those means, this circumstance is less to be regretted.

Hyacinths.—Hyacinths in beds or patches in the borders will now, if the weather has been mild, begin to make their appearance. Those which are in beds, and may be considered as of the choice kinds, should be protected from occasional frosts, and all from too much rain. As the shoots advance, let them be neatly supported with sticks. as they are apt to be broken if left unsupported, the flower spikes of large and double flowers being heavy; they should also be protected from accidental injury by being hooped over in a neat and secure manner, and occasionally covered with canvas, Dutch, reed, or garden mats.

Gravel Walks.—Gravel walks should now be put in good order for the season. Where the gravel is still clean and good, they should be rolled once or twice a week, so that the surface may be kept smooth, and agreeable to walk upon. Those walks which have been made a long time, and are become dirty upon the surface, as well as those which are liable to be overrun with different species of mosses and other weeds, should be turned, that is, they should be dug over with a spade to the depth of two, three or four inches, turning that which was the surface into the bottom, and bringing up from that depth a fresh surface; by this means the walks will appear as if they were newly made. Where gravel walks have been washed away during the winter in a season of heavy rains, or have fallen into holes or inequalities of surface, or which are otherwise out of proper repair, they should be topdressed with a thin coat of clean good gravel, and well rolled over. In forming new gravel walks, it is important that they be rendered perfectly dry at bottom, by having a foundation of from one to two feet thick of brickbats, flints, small stones, or such like matter. Over which the gravel is to be placed. Such preparation is necessary in all situations, however dry, but in wet ones it will also be necessary, in order to render them still more dry; to have a drain in the middle of each, below the stratum of flint stones, &c., which drains should empty themselves, at convenient distances, in such a manner that the water which they collect may be carried off to a distance, and not prove injurious to any part of the garden.

THIRD WEEK.

Auriculas.—The management of these plants must now be closely attended to, for the superiority of the plants will much depend on the treatment they receive from the present time till they are in a fit state to place under the hand-glasses. Care should be taken not to draw them up weakly. To avoid this, you must still continue to pull off the glasses as often as the weather will permit, and give as much air and light as possible. Caution is, however, necessary; sudden showers must be guarded against, for by this time, the trusses are fully exposed to the action of the atmosphere. In some of the varieties, the calyx of the buds do not reach sufficiently far to cover the tube, and the male parts of the flower are exposed, and liable to injury from water lodging among them. Whenever you observe this to be the case, use a small piece of damp sponge, and absorb it immediately, for if allowed to remain, it will most certainly injure the blossom. It is an excellent precaution to place these varieties beneath the bar of the frame, or strain a slip of calico across the middle, from front to back, about eight inches wide, for the purpose; this method allows of both air and light. The mealy grass plants should also have a similar protection, to preserve the white powder on their foliage, which is so desirable. Keep the soil well moistened, and such plants as are not in danger of injury may still be allowed to receive warm showers. By no means omit the night covering.

Carnations and Picotees, if not already potted off, should be immediately attended to. It will sometimes occur, either from neglect or accident, that the compost is not in proper condition for the purpose; if so, great attention must be paid to the plants while they remain in the small pots; repeated and liberal watering will be necessary, or great losses will be the consequence; allow them to receive rain, if the weather be at all congenial.

Tulips.—Protect them from storms of hail during the day. The young buds are showing themselves, and severe injury may occur from such storms. The first fine day, (if the soil in the bed be not too wet,) the surface may be slightly broken. In performing this operation, bear in mind that valuable offsets ofttimes make their appearance between the rows, and should not be cut, if possible to avert it. This will prompt you to do the work carefully. Having thus far secured your plants in a healthy state, do not now neglect covering them at night.

Dahlias.—Keep up the temperature of the hotbed, and have in readiness some fresh stable manure for linings; should an easterly wind set in, the heat will fall several degrees; take off cuttings as often as any are ready, from two to four inches in length; they should be cut close to the crown, and immediately under a joint. Pot singly in thumbs, or round the sides of larger pots, and plunge them in the hotbed, unless the heat be too strong at that depth. Dahlia cuttings will root in almost any sandy soil, so that it be sweet. We have found a compost of half sandy peat, and half leaf mould, most excellent for the purpose, adding a little more sand, if the peat was not sufficiently so; the pots must be well drained, and garden pots broken small is the best article for this purpose.

Pinks are much improved by top-dressing early in the season; where this is not convenient, the surface should be stirred, the numbers examined, and all deficiences made good.

Pansies.—See last number.

Tender Annuals.—Tender annuals may still be sown, to succeed those which have been already sown. Those which are sown earlier in the season will require to be forwarded by being pricked out, and afterwards shifted into larger pots as they advance, and a regular brisk heat kept up, either by renewing the linings, or making up fresh hotbeds for them, so that they may not sustain any checks in their growth. It is a rule which should never be lost sight of, viz., that with growing of tender annuals, particularly such as balsams, cockscombs, globe amaranthus, the nearer the plants are kept to the glass, the better, by which means they will not be drawn up weakly, nor flower in a premature state. Whilst the plants are in this state, let them have moderate supplies of water with the chill taken off, as often as they may require it, all over head, and let air be admitted daily in such quantities as the state of the weather will permit. As the plants advance in height, so as to touch the glass; let the frames be lifted up a few inches at a time, and this practice should be followed as often as they may require it. The soil in which tender annuals should be grown, should be as rich and light as possible; indeed, balsams and some others are brought to their greatest perfection in entirely rotten dung; good light mould enriched with rotten dung, and frequently watered with liquid manure, will bring the plants to great perfection, if allowed sufficient pot room, and regularly shifted.

Alpine and other rare Plants in Pots.—The potting of Alpine and other rare plants in pots or frames should now be finished, and after they are sufficiently established in the pots, they should be placed out in their summer station. There are, however, many which will require the shade and close air of the frame or pit during the summer, both for shelter and shade, particularly the latter: of these are most of the natural order orchideæ, many ferns and some other families, such as sarracenia, diosera, &c.; these should be kept in a close frame during summer, plunged on a thick mass of sphagnum or other mosses, and kept damp by often watering them overhead with a moderately fine rose watering pot. By far the greater portion of Alpine plants will succeed well in pots of the sizes called large sixties, or small and large forty-eights, in a soil composed of one half of light sandy loam, and half bog or peat mould, occasionally using a little fine white sand or decomposed leaves. During summer they should be placed in a situation as little exposed to the sun as possible; but not by any means under the drip of trees, in a bed prepared for them of finely sifted coal ashes, as already noticed, as the great object of a shaded situation is to give them the advantage of a cool and equable atmosphere; this will be increased by frequent watering overhead with a fine rose watering pot; but this can only be done with safety, either early in the morning or late in the afternoon. When such a practice renders the mould in the pots too damp, it is a thing to be guarded against in spring and autumn; but during the warm months of summer, evaporation will go on rapidly, and the plants being in small pots, exposed all round to the action of the air, will not be injured by it; water may then be given amongst the pots so as to keep the beds in which they stand always cool and rather damp. By a similar practice, we have been enabled to cultivate Alpine plants on an extensive scale, and the result has been entirely to our satisfaction.

Hyacinths.—Give proper shelter to the hyacinths from nocturnal frost, being careful at the same time not to stifle them for want of air. Their stems will be now advancing, and the necessary preparations must be made for their support. A strong stick should be thrust in near every root, but care should be taken of what kind of wood the sticks are made. Some are so thoughtless as to choose willow or even lilac, the consequence of which is, that the cutting takes root, and draws a great portion of the nourishment of the soil from the root. Let the support be a dry piece of wood, painted of a pale green, like the stalk itself, and not exceeding its known and expected growth in height; thrust the stick in so deep that it may be firm, and so near the plant that the stalk may be fastened to it without violence. It will thus answer the purpose, and be unseen. They have a bad notion of a garden, who think tall carved and painted sticks to be an ornament. The art is to conceal the support and even the tying. This, therefore, should be done with green loose yarn, and no dangling ends should be left.

Tuberoses.—Plant some tuberoses in a hotbed or in a hothouse, they will succeed those previously planted. Procure some roots from the seed shop, on their arrival from abroad. Let the loose outer skins be taken off, and if there be any offsets, let these be also taken away; then plant the roots in pots of light, rich earth, one root in a pot, inserted an inch or two below the surface of the earth. Then set the pots in a moderate hotbed, plunging them to their rims in the earth of the bed, or in a bark bed of a hothouse. To those in a hotbed, admit only a small portion of air till the roots begin to shoot; they must have but very little water till they come up, then water them moderately twice or thrice a week, and admit fresh air every day, and as the stems of the plants rise in height, the frames should be raised that they may have full liberty to shoot, for the stems generally rise a yard or more high. The practice to be adopted in the culture of this plant, is to keep the roots growing as vigorously as possible from May to October, but in a complete state of rest or drought for the remainder of the year. It grows best in light sandy soil, mixed with a third part of very rotten cow dung. If the earth be not light, add a quantity of sea-sand and fine shelly gravel. Those roots which are planted now, will begin to blow in June or July, when the plants may be moved to where deemed most proper; they will continue to flower for about a month or six weeks.

Polyanthuses may still be planted, and

also propagated by rooted slips, and the seed may be sown. Let the latter be sown on a border of light earth, not much exposed to the sun; sow it pretty thick, and when the plants come up, keep them from weeds, and give light waterings in dry weather, and in July or August prick them out in a shady border, three inches asunder, giving them some water.

Propagating Auriculas by Slips.—Auriculas are increased by the offsets or suckers which rise from the roots or sides of the old plants, and this is a preparation to slip and plant. They will now readily take root, and no doubt the favourite sorts have been marked out, the slips may be taken from those plants to which the preference is given, observing to slip them off close, with as much root part as possible. Plant the slips in a shady border for two or three months, and then pot them, and let each slip be planted singly in a small pot of fresh earth, and set them in a shady place, then give the whole a moderate watering, repeating it often in dry weather.

Planting Flowering Shrubs.—Where flowering shrubs are wanted, it is now a good time to remove them, but with as little delay as possible. When they are planted, water them well, and repeat it once or twice if the season be very dry.

Ranunculuses and Anemones.—The more valuable varieties of ranunculuses and anemones will now be progressing towards their bloom, and if planted in beds, can be readily protected from the effects of cold, cutting winds or frosts, which would be likely to injure them materially, by covering them with hoops and canvas. This covering should be permitted to remain on them during the hours of strong sunshine, which, if not prevented, would, after they come into flower, tend in a short time to bring on decay in the flowers; but if screened from all these occasionally, it will not only preserve the beauty of their flowers, but will continue them longer in bloom.

Planting Deciduous Trees and Shrubs.—The planting of all deciduous trees and shrubs should now be finished. This operation should always be finished in March, unless the trees intended to be planted have been taken up and laid in *by the heels*, which will check their growth sufficiently to warrant their being finally planted out the following month.

Hardy Biennial and Perennial Seeds—All seeds of this description intended to be sown, should be committed to the earth as early as the soil and weather will permit. As these plants do not flower the same season in which their seeds are sown, it is proper to sow them in the reserve garden.

Sowing and Pricking out Half-hardy Annuals.—Many half-hardy annuals may still be sown upon a slight hotbed, and as many of them as were sown last month may now, in mild weather, be planted out in the borders of the flower garden; the more tender sorts may be pricked out in a nursery-bed, covered with a frame and glasses; they will attain a good size, and be fit for final planting out by the end of this or beginning of next month. If, however, this operation be delayed until the month of May, the flowers will be the stronger. The more tender kinds of these plants should be, when fit, pricked out singly into small pots, and kept in a little bottom heat until the middle of next month, when they may be planted out with safety.

FOURTH WEEK.

Auriculas.—Carefully attend to the directions given for the treatment of these plants in the last number; be particular with those varieties with their tubes exposed, remove them under the bar of the frame, or give other protection. The same treatment will apply to the polyanthus.

Pansies will now be showing their bloom, and many expanded; if those produced by the weakly plants were taken off, it will considerably strengthen them. Where deaths have taken place in the beds, the deficiencies should be made good with your pot plants, if you have any, if not, the earlier you procure them the better, for nothing looks worse than a bed of these favourites in patches. Take cuttings, particularly of the scarce varieties; they will strike now in the open border, but are much safer at present nursed in pots, as they are more easily protected. Look over the seed-bed, and select or mark the most promising; be not too hasty in your determination, for at this season seedlings do not always assume their true character.

Pinks.—Keep the beds clear of weeds, and the surface of the soil open by occasional stirrings.

Carnations and Picotees.—Knowing how apt florists are to defer the potting off these plants, we must again remind them to commence as soon as possible, and also to keep the plants, while confined in small pots, constantly supplied with water. There will be no frost that will injure them now, it is, therefore, useless to cover with glass either night or day, unless heavy hail be falling; let them have rain in preference to water.

DAHLIAS.—Follow the directions given last month.

PLANTING EVERGREENS.—This is the proper season to plant all kinds of evergreens and shrubs; the success of transplanting very much depends on the length of time the plant has been out of the earth, and no doubt often on the size of the plant; it may be here worthy of observation, that evergreens in general succeed the better the taller they be, that is to say, plants under two feet high are to be preferred to those of a larger size; tall plants require to have a staff in their hands, on which they will lean, and wait patiently till small ones grow over their heads; no doubt, sometimes for a particular purpose, it may be proper to transplant large plants, and if very carefully done, and if they be well watered and supported, they may succeed; but a plantation of any considerable extent will acquire a body and figure sooner, by being formed with small plants than with large. This is also a proper time to plant evergreen hedges, as holly, evergreen, privet, yew, &c., which should generally consist of plants that have been two years raised, and which may be planted at eight or nine inches apart, if stout and well rooted, but if not so, plant at six or seven inches distant; trench or dig the ground well, breaking it fine, and give it a moderate dunging. Small rooted plants may be planted with the dibble, but it is better to plant by line with the spade, so that the fibres may not be crowded; if the weather be dry, the plants should be frequently watered, till they have taken fresh root, and occasionally throughout the summer.

MAKING SLIPS OF CHOICE FLOWERS.—If slips of campanulas, rockets, stocks, and wallflowers have not been made, it can still successfully be done; they may either be planted out to nurse in a shady border, or may be put into small pots, three or four inches in diameter, to be repotted as previously directed. In the former case, the ground should be pointed over, and broken fine, planting in lines, across four feet beds, at six or eight inches apart, and three in line, keeping the earth just a little moist about them, till they have struck root, and afterwards watering more freely. These to be potted, should be planted in fine light earth, one in each pot, and should be carefully watered and shaded until they have struck root, they may then be planted in a free, sunny situation, and must be frequently watered, perhaps once a day or in two days, according to the state of the weather. They will be fit for repotting in five or six weeks.

PLANTS IN POTS.—All choice flowers in pots, that have not been dressed and new earthed, should now have that done to them without loss of time. Attend to these, and all flowers in pots, in the article of water, and keep them free from weeds, stirring the surface of the earth with a point of a stick, at times as it gets hardened, which greatly encourages the plant, and lets the water more freely down to its roots.

SOWING DAHLIA SEED.—The seeds having been obtained the close of the preceding year, and carefully preserved during the winter, should now be sown in seed pans or pots, in a hotbed or other temperature of about fifty-five or sixty-five degrees. If the plants come up thickly, it will be well to transplant them into single pots of the small sixty size, one plant in each pot, and keep them in a temperature from forty-eight to fifty-five degrees till the first week in May, when they may be planted out in a border of rich, deep, mellow, good soil. They will require particular protection against late spring frosts, till towards the middle of April, afterwards their only culture is to stake them as they grow up, and select the most favourable looking flowers as they appear, throwing away those that are single or of inferior merit. The best and by far the most general mode of propagating dahlias is by cuttings, and in order to obtain these, the old roots are put into a state of growth early in the season, and the young shoots that spring from them, and which are produced in abundance, are employed as cuttings. Some extensive growers excite their dahlias roots as early as December or January, and continue to take cuttings off them as long as they continue to afford them, or until a sufficient number of plants of the desired kind are obtained. For ordinary purposes, the present is a good season to put the pots into a situation to grow, which is usually done when on a small scale by potting them in light mould in large pots, and placing them in a hotbed frame, vinery, plant stove, or any other convenient place where there is a temperature of about sixty or sixty-five degrees, or even more. Upon a larger scale, the old roots are placed close together, without potting upon a hotbed, shaking in a little light sandy mould or rotten tanner's bark amongst them. In either case, the young shoots soon begin to appear, and should then, as well as before, be occasionally sprinkled with water. When the shoots are from two to three inches in length, they may be cut off close to the old tuber, but not so as to injure its top or crown, because many more shoots will come from it, if required.

PROPOGATING AURICULAS BY SLIPS.—Auriculas are generally increased by the offset or suckers, which rise from the roots or sides of the old plants, and this is a proper time to slip and plant. They will now readily take root, and if you take off the slips when the plants are in bloom, you have the opportunity of seeing the flowers, and taking the slips from the plants of those to which you give the preference for the beauty of their flowers. The slips should be taken off close with as much root part as possible. Plant the slips in a shady border for two or three months, and then pot them, or let each slip be planted singly in a small pot of fresh earth, and set them in a shady place; but give the whole a moderate watering, repeating it often in dry weather.

SOWING TENDER ANNUALS.—A hotbed may be made any time at the present season, in which to sow the seeds of tender annual flowers. Make the bed, and sow the seed as has been already directed, or a few plants may be raised in pots in any cucumber or melon hot-bed; they will blow beautifully in June, July, &c., till October, when potted and afterwards planted out in the open border.

SOWING LESS TENDER ANNUALS.—A slight hotbed should be made at the close of this month, in which to sow the seeds of the less tender kinds of annual flowers, such as the China aster, Indian pink, palma christi, capsicum, French and African marigolds, chrysanthemum, mignonette, and ten weeks stock, tree and purple amaranthus, persicarias, scabionses, convolvulus major, and Chinese hollyhocks. In default of frames and lights, hand-glasses or oiled paper frames, or the bed may be arched over and covered with garden mats at nights, and in bad weather. Ten weeks stock and mignonette may be sown in borders, beds, or pots, for transplanting, or to remain three or four together; or for want of a hotbed or any other conveniences, many of the above seeds will succeed in a warm border next month without any protection.

GIVING FRESH EARTH TO PLANTS IN POTS.—Give some fresh earth to the carnations, auriculas, double wall-flowers, double stocks, July flowers, double sweet-williams, rockets, rose campions, catchfly, campanulas, and scarlet lychnis, and such like plants, which were potted last season.

THE FRUIT GARDEN.

FIRST WEEK.

HEADING DOWN YOUNG TREES.—All young trees planted either last autumn or this spring should be gone over at this time, and headed down or cut back, according to their various sorts, and the modes of training to be afterwards adopted.

PEACHES AND NECTARINES.—Presuming that maiden trees are planted as soon as the buds begin to push, they should be cut down, if strong trees, to six-buds or eyes, if weak, to four eyes, and if very weak to two buds. If trained trees have been planted, then the shortening of the shoots, as recommended for established trees, is to be adopted.

PLUMS.—If maiden plants, let them be headed down to six eyes, from which four or five proper branches may be expected, wherewith to form the future tree. If five branches appear, two of them should be laid into the wall, on each side of the centre one, which should be laid in upright. If only four branches appear, then one on each side should be laid in horizontally, the other two inclining to the right and left.

CHERRIES should be headed down to four eyes, and the shoots that proceed from them laid in as they proceed. No tree disagrees so much with the knife as the cherry; if it be rightly managed in the summer, there will be little use for that instrument at the pruning season. If there be four proper shoots after heading, which is often the case, as the buds of cherries are more opposite to each other than in most other trees, one on each side must be trained horizontally, the other two more upright, but still inclining to the right and left. If it should happen, as it sometimes does, that two branches can be laid on one side, and only one on the other, cut one out, so that there may be an equal number of branches on both sides, for if the tree be started with more branches on one side, it will be impossible ever to make a handsome tree. If the number of branches be equal, the middle one must always be trained a little more upright, so that they may be strong against pruning time, to shorten and produce more seed.

APRICOTS, if healthy, should be headed down to six eyes, and if weak to four. Their other management should be the same as for peaches, or for plums.

APPLES AND PEARS should be headed down to form six eyes, according to their strength. If five shoots should push, two on each side must be trained horizontally, the centre one upright; if headed to four eyes, and three shoots should push, one shoot on each side should be laid horizontally, and the centre one upright.

PLANTING AND PROPAGATING FIG-TREES.—This is the proper season to plant fig-trees, as those which are planted at this season are found to succeed better than at any other period of the year. This tree is easily propagated, both by cuttings and layers; the latter mode, however, is the most generally practised, and they are annually laid in pots. In planting, be careful to turn the plants out of the pots without disturbing the ball, unless the roots be much matted, in consequence of having remained too long in the pots, in which latter case, the balls must be carefully broken so as to admit of the roots being separated and spread out horizontally in the hole, into which they are to be planted. If planted against a wall, the shoots should be immediately nailed in, in order to prevent their being broken, to which, from their brittle nature, they are very liable Cover the surface round the stems with rotten dung or littery matter, in order to exclude the spring droughts; this is called mulching, and is a very necessary operation to be attended to in planting all sorts of trees. Figs, if propagated as noticed above, will, if moderately supplied with water during summer, strike root, and be by next season fit for planting out where required, and if left for another season, be in a good state, either for that purpose or for potting in large pots for forcing.

PRUNING FRUIT-TREES.—It is not too late to prune the trees, but the sooner it is now done the better, especially as the plums, cherries, apricots, and the early kinds of pears will now be seen coming into bloom. If the orchard trees, and the various kinds of standards, were not pruned in the preceding months, it may now be done.

PLANTING WALL, ESPALIER, AND STANDARD FRUIT-TREES.—Such of these trees as have not been put out, either in autumn or the two preceding months, should now be planted without delay, especially if it be a forward season, and before the trees are too far gone in vegetation. In all soils, this is a proper season to plant.

STRAWBERRIES. — Dress the strawberry beds, if not done in the former months, and the sooner this is done the better. The beds being cleared from litter, loosen the earth between the plants, and if a little fresh earth be added from the alleys, it will strengthen the plants. A farther supply of bearing strawberry plants, in pots may still be placed in hotbeds and hothouses, in order to succeed those of the former months, and to afford a supply till those in the open ground ripen in June. It is not unusual to throw away the strawberry plants that have been forced, but if the trouble be not thought too much, they may be made to bear a second crop in a very acceptable time, or in the autumn. Either shift them, reducing the balls, and pruning off the old roots, into fresh loamy compost, and plunge in a north border; they will recover flower and fruit in the autumn, or if only turned out of the pots at once in the same place, well-watered, and kept clean during the summer, they will yield a second crop. The roseberry is best for this purpose.

CURRANTS, GOOSEBERRIES, AND RASPBERRIES.—Any of these may still both be planted and pruned; but certainly the sooner now the better, and likewise that the ground be dry and put in proper order.

SECOND WEEK.

PRUNING APRICOT, PEACH, AND NECTARINE TREES.—Where apricot, peach, and nectarine trees, still remain unpruned, let them be pruned, nailed and finished by the middle of this month at farthest. In pruning, let the same method be observed as in the former months, and take notice that after the trees come into flower, instead of washing them with urine and soapsuds, as before recommended, they should be washed with clear lime and sulphur water, mixed with tobacco-water. The proper method of preparing it, is to get three hogsheads, butts, or pipes, according to the number of trees, in one of them to put about half a bushel of unslaked lime, and about two pounds of flower of sulphur, and to fill up the vessel with clean water and stir it up. In the other vessel, put about four pounds of tobacco, which, likewise, fill up with clean water; after they have stood for two or three days, for the water or liquor to get clear, the third vessel should be filled out of the other two, in proportion of two gallons of lime and sulphur water to one of the tobacco, which preparation is a most excellent remedy to prevent the attacks of insects, or fungi, upon the peach and nectarine trees in the spring, and the best mode of applying it is with a syringe. When the third vessel is filled out of the other two, they should be filled up again with clean water and stirred up, and when clear to be mixed again as above; but after three or four times, some more of the same ingredients must be added, otherwise it will get so weak as to be of no effect.

Propagating and Pruning Nut Trees.—Filberts and nuts of all kinds are propagated from seed, layers and suckers, but those who wish to have fine sorts should graft the trees, or lay down, in March, some of the straightest shoots, notched at a joint, pegging them into the ground, then cover them with earth about three inches thick, making basins around them with edges of mould about two inches higher than the surface of the ground, in order to prevent the water from running off: water them sometimes in dry weather, and mulch them with some rotten leaves to keep them moist. By the following autumn they will be fit to take up and plant out into beds in the nursery, where they should remain about two years, planting them out in August, where it is intended they should remain for good.

Pruning Vines.—Where vines are not yet pruned, let them be done as soon as possible, for when vines are pruned too late they are apt to bleed too profusely when that is not attended to. In order to stop the bleeding, Mr. Nicol says, that the following method may be practised with success. To four parts of scraped cheese add one part of calcined oyster shells, or other pure calcareous earth; press this composition into the pores of the wood, and the sap will instantly cease to flow. Plant cuttings of vines the beginning or middle of this month; they will take root freely. Or layers may be made in large pots, placed near the vine intended for propagation, and either draw the layer shoot through the hole at the bottom of the pot, and fill up the pot with earth, or bend the layer into the top of the pot a proper depth in the earth; in either method, when the layers are rooted next autumn, cut them off from the parent tree, or they may remain in the pots a year or two, till they attain a bearing state, and then cracking the pot, may be transplanted with the whole ball about the roots, or some may remain in the pots for fruiting, either in the full air or for forcing.

Planting Strawberries.—Strawberries may be successfully planted about the middle or end of this month. The soil should be put in good heart, by being properly manured, trenched or deeply dug, previously to planting, and if the weather be dry, the plants should have a plentiful watering, in order to settle the earth about their roots, which should be occasionally repeated.

Defending Fruit Tree Blossoms.—The opening blossoms of the early kinds of wall trees should be defended from frost, and the bad effects of frosty winds, that now generally prevail, particularly along the eastern coast of these kingdoms. The early kinds only, however, and those placed in the best situation, will as yet require attention in this respect.

Pruning and Training Young Apple Trees.—Any young dwarf apple, pear, plum and cherry trees, lately planted against walls, or espaliers, or still remaining in the nursery, with their first shoots, if only a year or two old, should now be pruned down to a few eyes, in order that they may put out some good shoots near the ground, to furnish the bottom of the wall or espalier therewith. If the heads of these trees are but one year's growth from the bud or graft, let them be shortened to four or five eyes, observing to do it just as they begin to form buds for shooting, as before mentioned. Supposing them to be two years from the bud or graft, and the first shoots were cut down last spring, let the shoots that were produced from them last summer, be also shortened to six, or eight, or ten inches. The same rule holds good with these at first training, as mentioned for the apricots and peaches, for it is in shortening properly the first and second year's shoots from the budding and grafting, that the whole success depends.

Grafting the Branches of Fruit Trees.—It often happens that fruit trees turn out to be of other sorts than those they were planted for, which in some kinds, particularly pears, cannot be discoved for many years, until they begin to bear fruit. This is a great misfortune, and it is often with regret that the tree is rooted out, and another planted in its stead. On the branches and stems of such, however, proper kinds may be engrafted with success, no doubt; the younger the tree or branches to be grafted the better, but those who are expert in grafting have wonderful success, even with very old apples, apricots, pears, &c. Cleft or crown grafting are the methods most generally practised by those who thus renovate old trees, or for fancy and amusement, engraft many different varieties on the same tree. If it be intended to renovate a tree entirely, all the branches should be headed and grafted, whether it has been fan-trained or has been trained horizontally. They need not, however, be all cut to equal lengths, but, indeed, should be cut at different lengths, in order to have new wood issue, not all at one part in a crowded manner but at various heights, and so as that there may be room to train it properly. Two, three, or four grafts should be put on each branch, according to its size, in order to insure the taking of one, which is generally enough to leave ultimately, unless it be thought right to leave two on the larger branches, or on the stems of such trees as have been trained horizontally, and have been headed entirely down. In grafting such on, branches more than two inches diameter, crown grafting is the method to be advised; for smaller stems or branches cleft grafting, methods known to every one proficient in the science of grafting, and which need not be here explained, particularly as it is not to be supposed a perfect novice would attempt a branch of the business so difficult on such trees as are now under our consideration. When it is intended to have a variety of fruits produced on the same tree, branches of different sizes, and on various parts of the tree may be grafted in either of the above mentioned ways, as may be most applicable to their sizes and situations. Small shoots or branches, less than an inch in diameter, may be done by whip grafting. In all cases, care should be taken to secure the grafts from accidents, and to encourage their growth afterwards by properly improving the soil in which the stock may happen to be placed, as particularly if it be a wall tree, it is much to be wished to have it fill its space quickly, that the wall may again be furnished.

THIRD WEEK.

Strawberries.—This is a good season for making new plantations of this excellent fruit In preparing the ground for them, it is necessary that it should be trenched or deeply dug, the roots of these plants penetrating to a great depth, and at the same time be well manured; they may be planted in rows, at from eighteen inches to two feet apart, according to their kind; or in beds, each containing three rows, with alleys of three feet between the beds, and the rows eighteen inches apart in the beds, and the plants twelve or fifteen inches asunder in the lines according to their sort. Choose the young plants from the runners of the preceding season, well rooted, and be careful not to mix the sorts whilst collecting the plants. Indeed every sort of strawberry, where it can be conveniently done, should be grown in separate beds, and at such a distance as will prevent their running into one another. Never plant old plants, but have the runners of the preceding season taken off when well rooted, and put into your nursery beds to gain strength, when they will be in good condition to plant in spring.

Planting Fig Trees.—No plant is easier propagated than the fig; they are increased readily—increased by suckers, layers, or cuttings. Being tender, they require both shelter and the warmest portion of the south wall, and without good management in pruning, both in summer and winter, and sufficient protection in the latter season, the crops are always precarious. In their native country the trees yield two crops every year; the spring crop ripens in the autumn, and the autumn fruit ripens in the following spring, or early summer. In this country the spring fruit never ripens, but those which are formed in our summer come to perfection twelve or fourteen months afterwards, hence the necessity of screening them from frost during winter. In very dry and warm situations the earliest sorts do pretty well as standards, planted in south borders, if their roots be well mulched and the head slightly covered in severe frost.

Pruning and Training Young Apricots and Peach Trees.—Now is the proper time to head down young wall trees, preparatory to their first training, such as apricots, peach and nectarine trees, planted against walls any time since last Michaelmas, with their first shoots, from budding at full length, which when a year old should be headed down low to force out lower branches, in order to furnish the wall properly from the bottom. This should be done just as the trees begin to push, therefore, watch the opportunity. The heads should be cut down to about five, six, or seven eyes or buds from the bottom, and if there be two roots from the same stock let both be cut down. By this practice the trees will produce some strong shoots near the ground, whereby they will be furnished with branches from the bottom to the top of the wall. But if the trees were not to be headed down, as above, they would run up with the stem like a standard tree, and not furnish any branches below, whereby the use of so much of the wall would be lost. Such young apricot, peach and nectarine trees, as were headed down a year ago, and have produced three or four or more shoots the last summer, should now be shortened to such lengths as may encourage each shoot to produce two or three new ones the same season.

Fruit Trees Budded and Grafted Last Year.—The fruit trees which were grafted and budded a year ago, should now have their shoots shortened, so that they may send forth liberal shoots or branches, in order to form a regular head near the stock.

Planting Fruit Tree Stocks.—Complete planting fruit tree stocks for grafting and budding of the different sorts for the different kinds of fruit trees intended to be grafted, planting them in nursery rows, two feet, or two and a half asunder, by eighteen inches or two feet in each row.

Weeding Seedling Trees.—Look over the seed-beds of young trees and shrubs; if weeds appear on them, let them be carefully picked out by the hand, before they mix their roots with those of the plants.

Watering Newly Planted Fruit Trees.—If any of these, being newly planted, have not been headed down, let it now be done as soon as may be convenient. They must also be attended to with respect to watering, which must be repeated the oftener as the season advances, and according to the state of the weather. What is called by the gardeners, mulching, is a very proper method of detaining the moisture about the roots, and in a great measure saves or abridges the labour of watering. Let a small basin or hollow be made round the stem of each tree, a foot or eighteen inches in diameter, and two or three inches deep, according to the extent of its roots; fill this basin with littery dung to the thickness of five or six inches, over which sprinkle a little earth, just enough to keep it from being blown about; if the dung be short, and much reduced, earth need not be put over it; this both nourishes the young fibres, and keep the ground about them moist in hot weather, if wetted freely once a week.

Currants and Gooseberries.—Either of these may still be planted, and prunned, but certainly the sooner now the better; and likewise that the ground about them be dug, and put in proper order.

Grafting Trees.—Grafting may still be performed, if required; the sorts which will yet succeed are some of the late kinds of pears, apples and plums, but the sooner they are grafted now the better.

FOURTH WEEK.

Melons.—Make hotbed ridges for plants raised last month, in order to be planted under hand or bell glasses. These hotbeds for hand or bell, glasses should be made the greater part above ground, not digging deep trenches, as is often practised, in which to make them, for by that practice you cannot readily line the beds quite down to the bottom when the heat declines. Making them in trenches in May, when no linings will be required, is not improper; but at this season do not make trenches deeper than about six inches. Each bed or ridge should not be less than two feet and a half thick of dung, but if made a yard high, will be more eligible by supporting a more durable heat, and should be three or four feet wide. But where there is plenty of dung, it will be best to make them four feet wide, and if there be more than one range to be made, extend them parallel near one another, allowing a space of at least three or four feet between, and if these spaces or alleys be in about a month or five weeks after filled with any moderate warm dung and covered with earth, it will throw a fresh heat, which will be of great advantage. The beds being made, earth them in two, three, or four days, when the dung will be settled, and the heat rises to the top of the bed, laying the earth eight or ten inches thick. When this is done, mark out the holes or places for the plants, at three feet and a half asunder, then set on the bell or hand glasses, one over each hole, and keep them down till the dung has thoroughly warmed. the earth, then forming a little hollow, put in the plants. Let two melon plants be set for each glass, observing to remove and plant them with a ball of earth about their roots. As soon as they are planted, let them be moderately watered; then set on the glasses, and if the sun be powerful, shade them a little with a mat over each glass; the waterings should be repeated once or twice a week, according to the degree of warmth in the bed, and temperature of the weather, but let moderation be always observed in this work, especially when newly planted.

Protecting the Blossoms of Wall Trees from Frost.—Continue to defend the blossoms on wall-trees, particularly those of the choice sorts of apricots, peaches, and nectarines. Where sheltering of those trees is practised, it should never be neglected, for although there may happen to be some fine warm days and nights; yet the weather is sometimes so very inconstant, that we often have such severe frosts as to prove the destruction of the blossoms on the trees that are exposed. They might be protected either with bunting curtains, mats taken down or rolled up and fastened on fine mornings, or with large nets, to remain day and night. If cuttings of evergreens be used, as laurel, yew, &c., let them remain till the fruit be past danger.

Newly Grafted Trees.—Newly grafted trees should now be frequently looked over to see if the clay keeps close about the grafts, it being very apt to crack, and sometimes fall off. When it is found to be defective, let the old clay be taken off, and add some new in its stead. All those shoots which rise below the graft must be taken off as they are produced; these, if permitted to remain, would rob the graft of nourishment, and prevent it shooting freely.

NEWLY BUDDED TREES. — Look over newly budded trees, that is to say, those that were budded last summer. They will now begin to advance their first shoots, to form the beginning of the future new tree. If the leaves curl up, insects are the cause of it, and if not prevented, will spoil the shoots in their first growth. Let the curling leaves be carefully picked off, suffer no shoots to remain that come from the stock.

FIGS.—Take care not to uncover the figs too soon in the spring, and it should be done partially, as there are frequently frosts and cutting winds in the months of April and May, which will infallibly kill the young fruit which were formed in the previous autumn.

ALPINE STRAWBERRIES.—Sow some seeds early in spring, in pots, which place in a hot-bed of a moderate heat; when the plants have acquired a proper size for that purpose, remove them into the open ground, where they are to remain; they will ripen their fruit generally towards the end of July, afford an abundant crop of fine fruit in autumn, and even so late as the second week in December, they will sometimes show a profusion of blossoms and immature fruit. Some think, from this management succeeding so well, that the Alpine strawberry should be considered and treated as an annual plant. The roots of the scarlet strawberry affording a crop of fruit in the hothouse early in the spring, will, if carefully removed out of the pots, or boxes, and placed in the open ground, yield another crop of fruit in September. This second crop is very abundant, the warm rains of July and August, proving highly favourable to the growth of the fruit, and as there is no other strawberry to be had at this season of the year, except the Alpine, the addition of the scarlet makes a pleasing variety in the dessert. Strawberries which yield their fruit in June, may be made to flower and fruit in the autumn, if divested of their spring flowers. This may be, in almost all establishments, a most useful expedient.

STRAWBERRIES.— The best sort of strawberries for forcing are the crown-red, scarlet and roseberry.

THE KITCHEN GARDEN.

FIRST WEEK.

GENERAL DIRECTIONS.—If the weather be now favourable, that is, dry and mild, the various operations of cropping should be attended to with diligence; no time should be lost in committing to the ground the requisite seeds and roots of plants. In early, light, dry soils it will be an advantage to sow and plant early, whereby the crops will gain sufficient strength to resist the droughts of summer; but in such as are cold, wet, and late, the state of the weather must determine the time of sowing. It is always better to wait till the ground be in a fit state to receive the seed, than to sow too early when it is not, as many of the less hardy seeds will not vegetate freely, indeed, scarcely at all, if sown at this early period of the year, when the ground is wet. Let all coverings be removed which were used in protecting vegetables during the winter, and rough dig all ground not immediately required, and that would be benefitted by the operation. The gravel walks should now receive every attention for the season, so that they may present an uniform and pleasing appearance, and all unpleasant objects should be removed, from this time till the end of autumn; for order and neatness are as necessary in the culinary garden as in that appropriated to flowers alone.

ARTICHOKES.—Where a plantation of artichokes is intended, let them be planted as soon in the month as good plants can be procured, observing that those suckers slipped off in spring-dressing the old plants, are the proper sets for this purpose. They should be planted in an open situation, and in good ground. Having procured some well-rooted suckers, trim any straggling parts of the top and root, but do not cut nor shorten perfect or entire leaves, as too often practised; then plant them with a dibble, in rows a yard and a half asunder, and two feet or a yard distant in the row. Water them at planting, if the weather be dry, and continue watering occasionally till they have taken root. A plantation of artichokes will produce good heads five or six years, and often longer; but it must be observed, that if required to have a succession of this vegetable for four or five months in the summer, a small plantation should be made every spring, for the old stocks which have been planted a year or two produce heads in June, July, and August, and those planted now produce heads the same year, in August, September, and October.

(Continued on page 82.)

THE GERANIUM, OR PELARGONIUM.—*(See p. 90.)*

THE APPLE.—(*See p.* 94.)

THE KITCHEN GARDEN.

CONTINUED.

Asparagus.—About the beginning or the middle of this month it will be necessary to clean and fork up the beds of this esteemed vegetable. Presuming that the beds have been covered with rich dung in autumn, it will be now proper to remove the less decayed portion of it, and to dig in the remainder, which should be accomplished by using a three-pronged fork instead of a spade, which latter would be liable to injure the crowns of the roots, particularly if near the surface. The beds should be forked pretty deep in order to loosen the ground, to give free liberty for the buds to shoot up, and also to give free access to the sun, air, and the showers of rain. When the beds are all forked up, let them be neatly raked over, and afterwards kept clear of weeds. Asparagus is increased by seed, which it produces in abundance, and is in general sown about this time, sometimes in beds, broadcast, or in drills; the latter, however, is to be preferred. If sown in the broadcast manner, the beds must be kept during the summer completely free of weeds, and have the surface occasionally stirred with a small hoe. In October the beds should be covered over with rotten dung, both for protection from the frost, and also to enrich the ground, should the plants remain in it during the second year. Some prefer to plant it out when only a year old, whilst others prefer allowing them two years in the seed bed. The seeds should be sown thinly, and the plants allowed plenty of room, by being afterwards thinned, if necessary. During the droughts of summer the beds should be frequently watered, to obtain roots of a good size for transplanting to where they will remain.

Basil.—Basil is a high flavoured herb, and is often used is soups. Sow a small spot under a wall, hedge, or pale, in fine light earth, about the end of the month, and cover it with bell or hand-glasses, as it is very tender; or it might be sown in a one-light box on a slight hotbed, where let it have plenty of air and be moderately supplied with water, till fit to plant out. When the plants have grown to the height of two inches, transplant them into a border of rich, light earth, in rows nine or ten inches asunder, and four or five in a row, or into a bed at six or eight inches square. Some sow where it is to remain, until it improves in growth by being transplanted. There are two sorts, the tall, and the bush basil, which are both used as pot-herbs, and may be treated alike in every respect. They must have gentle and occasional waterings, according to the state of the weather.

Beans. — Plant beans of every kind, for all sorts succeed well from this time of planting. Full supplies of the best sorts for principal crops should now be planted. Some of the most approved sorts put into the ground every fortnight will afford a regular supply during the season Now earth up to the stems of such beans as are up some height; it will strengthen the plants greatly, and encourage the growth.

Cabbages.—Transplant cabbage plants of all kinds into places where they are to remain to come to perfection. Also make up all deficiencies in former plantings. Few cultivators, we believe, deem it a sufficient matter of consequence to transplant the brassica tribe from the seed bed to the nursery bed, but content themselves with removing them at once to the situation in which they are to remain. The oldest cultivators we have consulted are in unison with our own ideas on this subject, viz.: that this operation is of very great importance, both as regards the excellence and earliness of the crops. Sow seeds of the earlier kinds of cabbages recommended last month, with the addition of any such sorts that may be considered preferable. In sowing the several sorts of cabbage seed, it will be most proper to sow them in open ground, a distance from trees, fences, or buildings, for when sown in rich, close situations, as is very often practised, the plants are drawn up weak and tender, and seldom attain an equal degree of perfection with such as are raised in a more open situation.

Carrots.—Crops of carrots may now be sown in light dry soils; sow in drills, ten or twelve inches apart, and cover them about an inch deep. In sowing carrots, as well as most other crops, the drill system is to be preferred, as presenting a much neater appearance, and affording an opportunity of stirring the surface of the ground between the rows at a greater depth than can be done if sown broadcast. The advantage of deep hoeing cannot be too forcibly impressed upon the mind of the cultivator, as it has the effect of resisting the droughts of summer, as well as greatly encouraging the growth of the plants.

Capsicums.—The seed pods of these plants are much admired for pickling, and for a variety of other purposes in domestic economy. The seeds may be sown in the course of this month, on a slight hotbed, in a vinery or any warm situation, the plants to be afterwards planted out at the bottom of a warm wall or pales.

Cauliflowers.—Remove the cauliflower plants which have been in frames or on warm borders during the winter, if not done in the former month. If cauliflower plants have been raised from seed sown last month, they should now be removed into a bed of rich earth, in a warm situation, towards the end of the month, but where a moderate hotbed can be obtained, it will be most advisable to prick them into it, which will forward them greatly. By placing out the plants on a moderate hotbed, it will bring them forward to be fit for transplanting in the middle of April, into the place where they are to come to maturity: they will produce their heads in July. Cauliflower seed may be sown early this month in the open borders, the plants from which sowing will come into use in August and September.

Dandelion.—The leaves of this common plant, when blanched like endive, are much esteemed by many as a salad. Plants of it, which are not difficult to procure, may be collected and planted in a bed of rich ground, when they will soon begin to develop their leaves, which should be covered over, as they advance, with rotten tan, leaves, or blanching pots. When the crop of leaves is gathered, the roots should then be dug up and thrown away, to prevent their spreading in the garden. A permanent bed of this plant may be admitted into any garden, if care be taken to pick off the flowers, thereby preventing its seeding.

Leeks.—Leeks, for a full crop, may be sown about the middle or latter end of this month. Some sow in drills, where they are to remain, and thin them out without transplanting, which is by no means an advisable method; for, by being transplanted, this vegetable is much improved, both in size and flavour. Sow, therefore, in a bed, or beds, of light earth, as directed last month. The true Scotch, or flag leek, is the best.

Mushroom Beds.—About the beginning of this month beds may be made for a supply of mushrooms, to last till they come in in the open ground, or even till winter, which they will often do. There is no rule for the time of making up these beds; however, it may be done on any day in the year with equal propriety.

Onions.—Onions, for the main crop, should be sown about the beginning of this month, provided it was not done in the latter end of February.

Nasturtiums. — Nasturtiums are often used in families; their flowers and young leaves for salads, the flowers also to garnish dishes, and their green berries to pickle. This is now a good time to sow them, and the sooner in the month the better. Observe that as of the nasturtium there is the major and minor, the former being of large running growth, and the most productive, is the proper sort for the above purposes; and there are also the red and striped flowering varieties, which are highly ornamental plants.

Peas.—Sow marrowfat peas once a fortnight, or three weeks at the furthest, particularly some dwarf green imperial marrowfats, which is a most excellent eating pea. When sowing peas, it is a good rule, when the plants of a former sowing are coming up, to sow another crop of the same sort, which will succeed the others in regular order of full bearing. Any of the larger or smaller kinds mentioned in the former months may be sown for general crops. Draw drills at the distance mentioned in February, sow them regularly, and cover them with earth about an inch and a half deep. All the sorts should now be sown in open situations, not under low spreading trees.

Spinach.—Sow spinach to succeed that sown last month; the sowings should be repeated once a fortnight or three weeks, in order to have a regular supply. Let the seed be of the round-leaved or smooth-headed kind, which is the most proper sort to sow at this season. Let it be observed, that spinach should not at this season be sown where the ground is much shaded with trees and bushes, for in such situations the plants would be drawn up to seed before they arrive to half their growth. Hoe or hand-weed the early crops, thinning the plants at the same time, but particularly those sown broadcast, three or four to five or six inches distant.

SECOND WEEK.

Artichokes.—Make a general dressing of artichokes about the middle or the latter end of this month. Where the ground has been trenched up, and laid over these plants last winter, let it now be levelled down, especially if the plants have begun to shoot tolerably strong, otherwise defer it till next month, observing, as you proceed in levelling down, to dig and loosen all the ground about the plants; at the same time examine the number of shoots or suckers, selecting two or three of the strongest outward ones on every stool to remain, and all above that number to be slipped off close with your hand, observing at the same time to open the earth deep enough above each stock or root, that you may readily slip the supernumerary shoots off clean from the place whence they arise, leaving at least two or three good shoots, but never more than three upon each root or stock, closing the earth in again about the root, and young plants, pressing it close about them with your hand. The shoots which are slipped off will make fresh plantations where wanted, for artichokes are increased by planting the young shoots, and by no other method, and this and the next month are the season to do it.

ASPARAGUS.—In preparing to form a new plantation for asparagus, it will be necessary to trench the whole space intended to be planted, to the depth of four feet, if the soil will admit of that depth. As the process of trenching goes on, a good quantity of the best rotten dung should be added, and very carefully mixed with the soil from the bottom to the top. If the soil be of a light sandy nature, a liberal dressing of ground bones should be added; and if a strong clayey texture, lime rubbish, and road-scrapings, commonly called drift, river, or sea-sand, should be spread with an unsparing hand. It should be remembered, that as this crop is intended to occupy the ground for many years, or, as William Cobbett quaintly remarked, "for a good long lifetime or more," and as there are no means of afterwards supplying the roots with manure, the geatest pains should be taken to render it as rich as possible. Where the soil is shallow, and the expense of making asparagus beds to the depth usually desired would be objected to, we find the following plan recommended by Mr. Cuthill in the *Gardener's Magazine*, vol. xii., p. 597:—"My plan is simply this—the ground intended for the beds, I had well sanded over and dug several times in winter; as for trenching, here it is out of the question. The beds were formed in the spring three feet wide, and the alleys the same. I put six solid inches of dung, measured on purpose, all over the bed, then four inches of prepared mould to plant in; the one year old plants were put in about three weeks after. As for the time of planting, there can be no stated period, but as soon as the buds are discovered growing, that is the proper time to plant them, two rows in each bed, and one foot apart in the rows. I took up a root this season to examine it, and found twenty heads, thrown up to the height of three and a half to four feet, with forty-five heads for next year visible. The roots had run in the channel of dung upwards of two feet. By the above plan, I have, no doubt, saved one year, and shall be able to cut asparagus when the buds are only three years old." The process of making asparagus beds is thus described in the *Horticultural Transactions*:—Prepare a piece of good land, unincumbered with trees, and that lies well in the sun; give it a good dressing of well reduced horse-dung, from six to ten inches thick, all regularly spread over the surface, then pierced with the trenching, if the soil will admit, two feet deep; after the first trenching, it should lie about a fortnight or three weeks, and then be turned back again, and then again in the same space of time; by this process the dung and mould become well incorporated: it may then be laid in small ridges till the time of planting. This work should be performed in the best weather the winter will afford, that is, not whilst it rains, or snow is lying on the ground, as it would tend to make the land heavy and sour; all this is to be particularly attended to, as the preparation of the soil is of more consequence than all the management afterwards. At the time of planting, another thin coat of very rotten dung is spread over the ground, and it is pointed in half a spade deep.

BEANS.—Now is the proper time to transplant the beans that were sown in November. They should be planted in a sheltered part of the garden, and if under a south wall, not too near, it will forward them, especially if watered in a dry time. Beans sown in patches may be easily covered in severe weather by a frame, &c.; make trenches to lay them in when transplanted; pull not off the bean adhering to the roots, shorten them a little, and put them in rather highly covered over the shanks. If planted aslant, they will soon grow erect, but this is only permitted in case of a shallow soil or long shanks and roots. If dry, give water.

BEET.—There may be said to be four kinds of beet, the red, green, yellow, and white, which are used several ways, as pot or salad herbs; the large leaves of the white and yellow are sometimes blanched, when full grown, for the sake of their thick ribs being peeled for stewing, and eaten as aparagus. By some the yellow is considered the best, though the white is most commonly preferred. Now is the proper time to sow beets, either in drills, or broadcast, and hoe them to a foot asunder. It must be borne in mind that they run to seed the second year. The red sort is cultivated for its root, and is preserved in winter in dry sand, as carrots are, and of this there is a turnip-shaped sort, that suits best in heavy shallow soils, and a long rooted sort, proper for light and rich ones.

They should be allotted an open situation, and for the red beet a good mellow ground, so that its root may attain a large growth.

CARROTS.—Carrots may now be sown for the principal crop. A spot of light ground in an open situation should be chosen for this vegetable, for the roots thrive best in such a soil and situation. A method of growing carrots and all other similar rooted plants to a large size, has been lately recommended as new, but which has been practised by cottagers for many years; it is, making with a large dibber, holes for the roots, filling them with rich light earth, and sowing a few seeds, and afterwards preferring single plants to each hole.

CAULIFLOWERS. — Proceed to transplant the cauliflower plants which have been under frames and hand-glasses, or on warm borders during the winter. These should be planted in a rich spot of ground, which should be dressed with some good rotten dung. Observe to plant the cauliflowers in rows thirty inches asunder, allowing them the same distance between plant and plant in the rows. The ground where the crop is to be planted, may be previously sown with spinach and radishes. If thought necessary, according to the instructions already given, draw some earth to the stems which are continued under hand or bell-glasses for the early crop; it will strengthen them, and forward their growth.

CHERVIL AND CORIANDER.—Sow chervil and coriander for soups and salads; draw shallow drills for these seeds, eight or nine inches asunder, sow each sort separately, and cover them about half an inch deep in the earth.

KIDNEY BEANS.—Sow more kidney beans in a hotbed or hothouse, in order to continue a regular supply of the early crops, observing the same methods as directed in January and February.

LETTUCES. — Transplant, if settled mild weather, some of the lettuce plants from the beds or borders, where they have stood all winter, if they stand too closely. In doing this, observe to draw the plants out regularly, and let the strongest remain in the bed or border, at ten or twelve inches distance; then loosen the surface of the earth between them with a hoe, and clear away weeds and litter. Lettuce seed of different sorts should be sown at the beginning of this month, and in order to have a regular supply, let some more be sown about the middle, and a third sowing about the end; from these sowings a supply of lettuce will be obtained in full growth in May, June, or July, which will be succeeded by others sown in April, &c.

MUSHROOMS.—About the beginning or the middle of this month beds may be made for a supply of mushrooms, to last till they come in the open ground, or even till winter, which they will often do, if made as directed in our last number. There is no specific rule for the time of making up these beds; however, it may be done at any day in the year with great propriety.

POTATOES. — Potatoes may be planted about the middle of this month on a light early border. If the ground be in pretty good heart, it need not be manured for this crop, as they are seldom allowed to come to full maturity, and it is only in that case that potatoes exhaust the soil. For crops that are meant to stand till fully ripe, the ground ought to be put in good condition, either by previous or immediate manuring. Select for this plantation some of the early kinds, as the ash-leaved, or early dwarf, but preferring the former. These require less room than any other with which we are acquainted. Fifteen inches between the lines, and six or eight in a line, is enough. Plant in drills three inches deep, if the ground be anywise deep or stiff. If light and dry, the dibble may be used, but only to save time, for drilling is to be preferred to dibbling, for all seeds and roots whatever.

SAVOYS.—Savoys for an early crop may be sown about the middle of the month, and for a successional crop about the end of it. There are two sorts, green and yellow, and of the former two varieties, plain and curled.

SPINACH.—Sow spinach every ten days or a fortnight till the first of August. The crops of the former month should be regularly thinned and cleaned of all weeds.

TURNIPS.—A little of the early Dutch sort may be sown in a rich light warm border, or other sheltered spot, about the middle of the month, but if sown at the end of the month, it may be more depended upon, as the early sown crops are very apt to run to seed. Sow broadcast thinly, tread or beat lightly, and rake fine. If the weather be dry, give a gentle watering, which repeat.

THIRD WEEK.

ARTICHOKES.—Let the littery part of the covering be removed from the rows of old artichokes, and dig in the smaller part of it amongst them; previously reducing the number of plants on each shoot to three or four of the strongest, as otherwise they would grow too thick, and the heads would consequently be rendered diminutive. Old stools should not stand above six or seven years, as they then begin to produce trifling heads; the best way is to plant a few every year, by which mode also a succession may be had each season, the newly planted ones coming on in autumn, after the others have done producing fruit.

ASPARAGUS—Now take off the rough part of the covering; put the small or rotten part of it into the intervals of the rows, or into the alleys if in beds; in the latter case, and also if the plants be under four years old, with a spade, but otherwise with a fork, taking particular care to wound the roots as little as possible. No plant feels a hurt in the root more keenly than asparagus; the fibrils are very brittle, and if broken do not readily shoot again. In digging, shed a little earth on the crowns of the plants; and smoothen all with the rake.

BEET.—It is quite soon enough to sow red beet, as it is apt to shoot for seed if sown earlier. For a full crop, the middle of April is the fittest time; the roots only of the red sort are used, and if the plants shoot for seed, these get hard and are in a manner useless. Of the white or green sort, the leaves only are used in the manner of spinach, and as the culture of it resembles that of spinach in all respects, except that it needs a little more room, we shall in the present instance confine our directions to the red kind, which requires a management more particular. It likes a deep, lightish earth, moderately rich. It will thrive very well in rich sand, but in stiff shallow soils it sickens, and the roots get forked and cankered; do not sow with manure, except of well-reduced compost, as rank dung induces canker. It is better if the ground has been dunged for the preceding crop. Trench or subtrench to the depth of eighteen inches at least, if you would have the root in perfection, and break the earth fine, if any wise heavy. Choose the dark red or purple sort, with small tops; the large-leaved kind produce poor spindly roots. After digging or trenching, roll the ground lightly, or tread it smoothly, and sow in drills thinly, an inch deep, and twelve or fifteen inches asunder, according to the quality of the soil; cover with the hoe or the foot, and smooth all with the rake.

CABBAGES.—Sow more white cabbages for crops to succeed those sown last month, and for a full crop. Likewise now sow red cabbages. Plant out full crops of all these, and earth up the early plants that need.

CAULIFLOWERS.—Sow cauliflowers in a rich open spot of ground, any time after the middle of the month, for a full crop, and if none were planted last month, let that now be done without delay. Those sown about the beginning of last month, will be fit to prick out the latter end of this or first of April. Let this be done on a bed of rich light earth, pricking them in at three or four inches square; watering and shielding them from the sun, till they have struck root. Cauliflowers under hand-glasses, should have a little air admitted to them for a few hours in the middle of the day, and should be supplied with moderate quantities of water; observe to pick off all dead leaves as they appear, and to admit air more freely as the season advances.

CELERY, for a full crop, may be sown about the latter end or the middle of this month, on a bed of light earth, in an open situation. If the seed be sown in rich vegetable mould, and kept rather moist, it will thrive the better; water the bed frequently in dry weather. Celeriac, or turnip-rooted celery, is much hardier than any of the other sorts, and is, therefore, cultivated very extensively in Germany, and the north of Europe, where the Italian or English celery will not stand the inclemency of the weather. The culture of the celeriac differs little from that of celery, only that the former being a bulbous-rooted plant, requires much less earthing up than the latter.

CUCUMBERS. — Examine the state of the cucumber beds, and see if they be of a proper degree of heat, so as to preserve the plants in a state of free growth. Let the plants have fresh air every day, by raising the upper end of the glasses from about half an inch to one or two inches in height, in proportion to the heat of the bed and warmness of the weather, always more freely in sunny, calm, mild days, than when cloudy or a sharp air, and when the weather changes colder, &c. Diminish the admission of air, or shut down the glasses if very cold, and always shut close towards the evening, about three, four, or five o'clock, according to the temperature of the weather. Refresh them now and then with water moderately, and in mild sunny days, from ten to two o'clock. Cover the glasses with mats every evening towards sunset, and uncover in the morning about an hour at most, after the time of sunrise, or if a sunny morning, as soon as the sun shines fully on the frames.

JERUSALEM ARTICHOKES.—Jerusalem artichokes may be planted at any time this month. They will thrive in any situation, and in any ordinary garden soil, being a very hardy plant, and when once planted, are not easily eradicated. Plant sets of the roots, which are the eatable part of this vegetable, as in planting potatoes, in rows a yard asunder, and nine or ten inches in the rows. A small quantity will serve an ordinary family, being very productive. The roots grow in tubers, something in the manner of a yam: the stalks tall and upright. In taste, the roots resemble an artichoke, and hence the name. This vegetable, before the introduction of that most valuable one, the potatoe, was held in great esteem, being an excellent winter root of agreeable taste.

KIDNEY BEANS.—Sow some seed on a slender hotbed or thick in pots placed in any hotbed now in cultivation, about the end of this month, for transplanting into warm borders, the middle or latter end of April. Sow more kidney beans in a hotbed or hothouse, so that a regular supply of the early crops may be continued, observing the same methods as directed in January and February.

LEEKS.—This is a good time to sow leeks for a full crop in strong and late soils. Sow thinly in beds to be afterwards transplanted, or they may be sown where they are to remain, but will not by this mode attain so large a size; if in the latter case, sow in drills eighteen inches apart.

LETTUCES.—Lettuces may be sown once a month till the first of September, where a constant succession is required, sowing on a north border, or other shaded place in the summer months. Plantations will also require to be made from these sowings, as the plants become fit for planting once a month, which will afford a regular supply, those transplanted always succeeding those left in the seed beds; the kinds are numerous and may be sown or planted according to fancy; but those most to be preferred are the green cos, white cos, hardy green, black seeded cos, brown Dutch cabbage, green Dutch cabbage, the Silesia, and some other kinds, grow very large, and are fittest for soups or stewing. Plant in lines from nine to twelve inches apart, and six or eight in a line, according to the sorts and quality of the soil, and observe never to plant so deep as to bury the heart leaves. If the plants sown in January be fit for removal, let a few be planted out in any open situation, about the end of this month, either by themselves or between the lines of newly planted asparagus, artichokes, currants, gooseberries, or the like, where there is room.

MINT.—Mint, that is, sweet or spear mint, is easily raised from slips of the root, which may be either planted closely in a bed or in lines six or eight inches asunder. It will grow almost anywhere, but thrives best in a moorish, light earth. A small bed or a few rows is sufficient for an ordinary family. If wanted early, a little might be covered with a hand-glass or two, or by a frame and lights, from the first of February, which would bring it forward.

ONIONS.—Now sow full crops of onions, in the manner as directed last month. Sow in land of a middling texture, at the beginning of the month, but in stiff or wet soils towards the latter end of it.

PARSLEY may again be sown for successional crops, that is, of the plain and curled sorts. At the end of the month sow a full crop of Hamburgh parsley.

PEAS AND BEANS.—Draw earth to the stems of such peas and beans as are up some height; it will strengthen the plants greatly, and encourage their growth. Sow successional and full crops of marrows, rouncevals, Prussians, &c.

SAGE.—Sage will either grow by cuttings or by slips of the root with facility. This is the season for planting slips, but the end of July or first of August answers best for making plants by cuttings. Light soil is to be preferred, though they will grow in almost any garden earth, but in wet ground they often perish in winter. A few slips, either in a bed or in lines, will be sufficient. If it be wished to dry some for winter use, more will be required. There are two kinds used in the kitchen, the green and the purple; the variegated kinds are reckoned ornamental plants.

SAVOYS.—Savoy seed for a principal crop to serve the family from about Michaelmas to Christmas, should be sown about the middle or towards the latter end of the month in an open situation.

SMALL SALADING.—Cresses, mustard, and rape, should be sown once a week in a dry warm border. But were the convenience presents itself of forcing houses or hot frames, prefer sowing them in flat boxes for the purpose of taking the benefit of such convenience. Sow in light vegetable mould, or sandy earth, or in rotten tan.

RADISHES of all kinds may now be sown in warm borders in the open air.

THYME may be raised from seed or by slips. Sow in a bed of light earth, and when the plants are two inches high, plant them out in rows nine inches apart, and four or five in a line, or plant slips at these distances, or thin out the seedlings to six inches square, without transplanting. Any of these methods will answer, or edgings for alleys may be made of the seedlings, planted at the distance of two or three inches in lines.

FOURTH WEEK.

ARTICHOKES may still be dressed, and new plantations of them made with success. All the suckers are to be taken off, leaving three only of the strongest shoots to fruit. Those without roots will grow by planting deep and keeping moist.

ASPARAGUS.—To plant beds of asparagus, set the line nine inches from the edge of the bed, and cut the trench upright close to it, so deep that the crowns of the roots may be full two inches below the surface. If the mould of the bed lies lightly, and is likely to settle much, the crowns of the plants may come very near to the top, and two inches of mould put on afterwards, which is indeed the best method for planting, but if the ground be not expected to settle, two inches of the top mould must be first drawn aside to cover with. The roots must be neatly spread against the trench, and cut as little as possible, that is, only the damaged parts off. This should be done with a sharp knife, and it would be better if done the day before they are used, so that the ends may dry and peal. It is of consequence to have the plants dug up carefully, with a three-pronged fork, so that they may not be injured.

BASIL.—When the plants have grown to the height of two inches, transplant them into a border of rich light earth, in rows, nine or ten inches asunder, and four or five in a row, or into a bed, at six or eight inches square. Some sow where it is to remain, but it improves in strength by being transplanted. There are two sorts, the tall, and the bush basil, which are both used as potherbs, and may be treated alike in every respect. They must have gentle and occasional waterings, according to the state of the weather.

BEET.—Beet for a full crop should now be sown, the ground should be subtrenched and well broken, which will prevent the roots from forking. Sow in drills twelve inches apart, and moderately thin; if the seeds be good, cover lightly, and if the ground be dry, tread the whole slightly. The true blood red is the sort most esteemed for its roots. White beet is cultivated as a substitute for spinach, the white or small sweet beet, for the midribs and stalks, and are stewed and eaten like asparagus, under the name of chard. In dry seasons, beets are liable to be destroyed by the turnip fly ; it is, therefore, advisable to sow a small bed or two in different parts of the garden. If the general crop fail, then it may be made good by transplanting those from the seed beds, although beet, like most similar roots, succeeds better when not transplanted.

CABBAGES.—Transplant cabbage plants of all kinds into the places where they are to remain to cabbage ; but if the plants be strong and in good order, the sooner the better. Let them be planted on good ground, enriched with dung, at two feet or two and a half distance, for the sugar loaf and other forward kinds, but the large tall cabbage plants should be set a yard asunder. The above distances are to be understood of such plants as are to remain to grow to their full size, but such of the forward kinds as are to be cut whilst young may be planted closer ; eighteen inches to two feet will be sufficient. Plant out also the general crop of red cabbage, if not done in Autumn ; allow them two feet and a half or a yard distance. Now sow the seeds of cabbages of any sort, the beginning or middle of this month, both of early kinds for successional young summer cabbages, and large late sorts for autumn and winter crops. Any of the early kinds may now be sown, either for succession or as substitutes in default of early winter standing plants, or for general summer crops. Red cabbage seed should be sown in the beginning or middle of this month, for the purpose of raising plants for winter and next spring service ; they will be tolerably well cabbaged about Michaelmas, and continue good till the spring.

CAPSICUMS.—Capsicums for pickling or preserving, may be sown either in a hotbed or in any kind of forcing house in a large pot, pan, or box, filled with fine light mould ; when two inches high they should be pricked out into small pots of three inches in diameter, afterwards to be repotted, and placed in a hothouse, or to be planted out in June, under a wall or hedge ; or they may be planted in any kind of forcing house, so as they may not be too much shaded, and may have sufficient room ; in any of these ways their culture is simple, they require light moderately rich earth, and pretty free supplies of water.

CARROTS.—Carrots for full crops should now be sown. The sorts are the Early horn, Orage, Long red and the Altringham ; but the latter is decidedly the best, although some prefer the Early horn. The ground should be deep dug or trenched. In strong stiff soils, deep drills should be drawn, which, when filled with vegetable mould, or light dry sandy earth, will be in good condition to receive the seed, which may be sown in slightly formed drills, in ground thus prepared. As the young plants are liable to be destroyed by insects, the better practice is to sow thick. It may be here observed, that should the crops of this vegetable sown at this time, or at a more early period of the season, fail, the deficiency may he made good by sowing still later, for even the middle of May is not too late, by which the grubs will probably have attained their fly state, before the plants come up.

CAULIFLOWERS.—The early cauliflowers under hand or bell glasses, should have earth drawn up about their stems. This will be of great service in promoting their growth, hut let due care be taken that no earth be drawn into their hearts, for that will prove very injurious to the plant. The plants may still he kept under hand or bell glasses at night, and when there are warm showers, let them be exposed to the free air, and when they become advanced in growth, the glasses should be lifted proportionably high on props; first raising up a border of earth two or three inches ahout the plants, then place the props upon that, and set the glasses on the props, hut about the end of the month, if the plants be large, they should be taken away altogether. Where any of the winter standing cauliflower plants in frames, borders, or in pots, &c., were not finished planting out last month, let it now be done. Young cauliflower plants raised from seed sown last month, should now be pricked out into nursery beds, or if small, plant them on a slight hotbed, to forward them for final transplantation.

KIDNEY BEANS.—Kidney beans may be sown in an early, light, rich border, as a succession to those which were earlier sown. The speckled dwarf are the fittest for this sowing, and the negro, Battersea, or liver coloured for the later crops. Sow in drills thinly at two feet apart, and two inches deep, or drop in the beans at an inch apart with the hand, which will make a more even crop. Cover and dress with the rake, but do not tread the ground. If it be required to have kidney beans very early, or to continue a succession to those already sown in January or February, some may be sown in boxes in the hothouse, or on a hotbed, and when fit, may be planted out at the bottom of a wall or hedge, in a south aspect, and in fine rich earth. If in single line, plant it three inches apart, and if in double lines, let them be at a foot asunder, and plant at four or five inches in line; thus keeping the plants as near to the wall or hedge as possible, that they may reap the henefit of its shelter. Ohserve not to plant too deep, and to give a little water after planting.

LEEKS.—Leeks may still be sown for a full crop, and if now sown will succeed very well. Water immediately, if the weather be dry, and repeatedly, in order to forward them for transplanting, and that the crop may come to full perfection.

MARJORAM.—Sow in a bed of light earth, and when fit, transplant into rows nine or ten inches apart, and three or four in a line. If the knotted or sweet marjoram be wanted earlier, a little may now he sown, and be covered with a hand or hell glass in order to bring it forward. Pot marjoram may also be raised by slips of the roots.

ONIONS.—Onions require a rich mellow soil, or a dry subsoil, and are an exception to the general rule of never cropping the same ground successively with the same plant. Some gardeners sow onions in the same piece of ground for many years, and in some places they are sown twenty or thirty years successively, but annually manure the soil. After the ground is dug, the manure is spread on the surface in a very rotten state, and the onion seed is sown in the manure, and covered over with mould from the alleys; by this method, they produce fine crops in almost all seasons. Onions must naturally act, to a certain extent, as exhausters of the soil in which they grow, at least, those parts of the ground from which they derive their principal nourishment, yet we find the same piece of ground for twenty years producing excellent crops. If the ground be prepared as advised, in Novemher, which is to manure it in autumn, and to rough dig it, which is to be done hy digging in the compost manure, and laying the ground up as rough as possible, so as to present as large a portion of surface to the action of the frost and rain as can be done, it becomes to a certain degree renewed; as the fibrous parts of onions, which are, correctly speaking, their roots, penetrate only a few inches deep, and if they partly exhaust the surface of one year, the operation of digging deep hrings up an entirely new surface for the crops of the next. Take the advantage of a fine day, when the ground is dry, to point over or slightly dig the surface, and in doing so, break the clods well with the spade, or loosen the surface with a large rake; as the operation of digging proceeds, drill the ground an inch deep, and sow the seed reasonably thin, hut in this particular he guided hy the quality of the seed, which can be ascertained by sowing one hundred, or fifty, or twenty seeds, in a pot or pan, which may be placed in any of the forcing departments to vegetate quickly. Count the number of plants which come up; hy this means the quality of the seed can be correctly ascertained, and then sow thickly or thinly, according to the result of the experiment. The drill system is to be preferred.

SAVORY.—Savory is propagated in all respects as already directed for marjoram. The sweet sort, if wanted early, may be forwarded by hand glasses, or by a frame and lights. Winter savory may also be propagated by slips.

SORREL is used both as a salad and in the kitchen. There are two sorts, the common and the French. They may be raised from seed, but are generally propagated by slips, or cuttings of the root. They will grow in almost any soil or situation, but they like a sandy earth best. Plant in beds at six or eight inches square, or in rows nine inches apart, and five or six in the row. They will soon cover the ground, in either case, and it is no easy matter to eradicate them afterwards, as every chip of the roots will grow.

TARRAGON.—Tarragon may be raised from seed, and may be transplanted, or it may be raised by slips, as for other herbs, allowing it, however, less room. It will also grow very well by cuttings made in August. In wet soils it is apt to perish in winter.

TANSY.—Tansy will grow freely in any garden soil. Plant by slips of the root, and very few; a dozen or two, at most, will be enough. Give it room to bush, if you plant in patches; if in a row, allow twelve or fifteen inches between the sets.

THYME.—Thyme may be raised from seed, or by slips. Sow in a bed of light earth, and when the plants are two inches, plant them out in rows nine inches apart, and four or five in a line, or plant slips at these distances, or thin out the seedlings to six inches square without transplanting. Any of these methods will answer, or edgings.

CULTURE OF GERANIUMS, OR PELARGONIUMS.

THE original genus of geranium, or crane's-bill, included those of erodium and pelargonium, the latter signifying stork's-bill. They were separated by the late Monsieur L'Heritier, but the vernacular name, geranium, has been very generally retained when speaking of either in an ordinary sense. Indeed, so slight is the difference between a crane's-bill and a stork's-bill, that we do not consider Monsieur L'Heritier has conferred a benefit upon botanical science by the introduction of the name pelargonium, which, in the sense in which it is used, is a distinction with scarcely any difference. There are almost innumerable species, hybrids, and varieties of geraniums grown in our own greenhouses, so mixed up by hybriding, that it is very difficult now to class them. One of the hardiest kinds, and which has numerous descendants, is the horse-shoe geranium, and another is the common scarlet. The rose-scented and oak-leaved, the flowers of which are all crimson, are also tolerably hardy.

Geraniums are propagated either by seeds or cuttings, the former in particular, when the object in view is to originate or obtain new varieties. However repugnant this may be to the systematic botanist, by creating a confusion in his arrangement, it is, and has been for some years, a favourite sport of the floriculturist, who has created varieties by hybridisation almost without end. The process of cross-impregnation, although before known, was not much practised prior to the beginning of the present century; and so far as relates to geraniums, Davy, of the King's-road, was amongst the first who succeeded in obtaining improved varieties. He was soon after followed by Sweet, the botanist, who, perhaps created more hybrids than any floriculturist of the present age.

The theory of cross-impregnation was first reduced to practice by the celebrated botanist Kolzeuter, who published his experiments in the transactions of the Petersburgh Academy, in 1784. T. A. Knight, Esq., president of the London Horticultural Society, was, so far as we are aware, the first who practised the art in this country; and the success that followed his experiments is sufficiently exemplified in the many excellent varieties, both of fruits and vegetables, which he has produced.

In order to obtain new or improved varieties from seeds with any degree of certainty, it is indispensable that the process of artificial fecundation takes place, and for that purpose, the stamens of one of the parent plants should be cut carefully out with a pair of sharp-pointed scissors before the pollen arrives at maturity. The pollen of the other parent should be transferred to stigmas of that from which the stamens have been removed; and this is easily effected by the aid of a camel's-hair pencil, or the point of a feather. This process should be proceeded with whilst both flowers are in full perfection, and in the early part of a fine sunny day if possible; covering up the flowers so impregnated with a piece of fine, thin gauze, in order to prevent insects, or other causes, from bringing pollen from other flowers. Geraniums, in general, seed so freely, without artificial assistance, that abundance of seeds may be annually obtained, where a collection is kept. But the chance of originating improved varieties from such seeds is very remote; whilst the chances from that which has been artificially fecundated, are much more certain.

Seeds procured by these means are often sown as soon as ripened, and this is certainly the best plan when they ripen prior to July, as they will have sufficient time to gain strength to stand the following winter; but such seeds as do not ripen till the end of August or September had better be kept till March, and then sown. The soil most proper for sowing the seeds of geraniums is a light rich vegetable mould. The pots should be about five or six inches in diameter, well drained, and filled with mould, to within half an inch of the brim. The mould should then be made as firm and smooth as possible, on which the seeds are to be placed, and covered with the same mould to the depth of rather less than a quarter of an inch; when this is done, the pots should be well watered, and placed on a slightly warm hotbed, till the seeds come up. When the young plants have attained the height of two or three inches, they should be transplanted into other pots, in equally light rich mould, and kept in a moderately warm frame, having abundance of air and light admitted to them at all times. When they have established themselves, so as to require repotting, which will be the case in two or three weeks, they should then be potted off into single pots of the size of large sixties, or, if very strong, into small forty-eights. A cool pot or frame is now the best place for them, when plenty of water, air, and light may be supplied to them. Some will show flowers in pots of this size, but those that are expected to be the best should be encouraged in growth by repeated potting, in order that they may become strong, and produce their flowers in the fullest perfection. Such as are of inferior pretensions are to be planted out in the borders to take their chance, but the most promising are to be retained in pots, and placed in the greenhouse.

All the shrubby kinds of geraniums, which are generally kept in greenhouses, require a rich, loamy soil; that is, about half very rotten dung, and half sandy loam, in order to make them produce fine flowers. When the flowering season is over, the plants are cut down, and, cuttings, made from them. When these have struck, they are potted in compost of vegetable mould and sand, and kept in this soil till February or March, when they are repotted in rich soil for flowering. When the plants are wished to flower particularly well, they are put into hotbeds after repotting in February or March, to bring them forward; and they are tied down to little sticks placed round the pot, to keep them bushy. Some gardeners throw away the old plants, as soon as they have made the cuttings; but others take the plants out of their pots, and, shaking the earth from them, cut the roots, and repot the plants in smaller pots, or tie them up by the roots, and hang them in a cellar, till the time for repotting in the spring. Some persons, after taking them out of the pots, lay them in rows in a cellar, and cover the roots with sand till February, when they are repotted, and placed in a hotbed to start them, as the gardeners call it; that is, to make them begin to grow. No plant has been more improved than the geranium is by the new system of rough potting, and mixing the soil with charcoal. According to the old plan, the loamy soil in which the geraniums were planted soon caked together, and became so hard, as to be alike impervious to water and air. When this is the case, the plants being deprived of their proper supply of carbon, become weak, and are more disposed to produce stems and leaves than flowers.

By the system of rough potting, on the contrary, air and water are admitted freely to the roots; the consequences of which are, that the plants are compact in shape, and covered with splendid flowers. Geraniums require a great deal of air, and when about to flower, they should have a great deal of water; but at other seasons very little. They are killed with the frost, and they are very liable to drop off if watered too much, and not allowed sufficient air in winter. Air is actually indispensable to their growth and beauty.

A PERSON who has succeeded in growing pine-apples in the open air, says, that he is convinced that the pine-apple is hardier than a ridge cucumber, and may be cultivated in the open air with more certainty of being produced in perfection than cucumbers and other tender plants, which for years have been cultivated in the open air in summer.

RANK STEAM.—To prevent the danger of rank steam from dung linings injuring plants in frames, instead of filling the lights with glass in the usual way, have two blank squares of wood in the top of the lights, in the centre of which is a hole cut one inch in diameter, and covered with a piece of tin or lead, so fastened as to turn with ease; these are opened as they may be required, either by day or night.

VARIOUS PICKINGS.

METHOD OF MULTIPLYING FRUIT-TREES IN THE IONIAN ISLANDS.—"There is an ingenious and very successful mode of multiplying orange and lemon trees, which probably admits of application to fruit trees and to shrubs generally. From a branch, conveniently situated, a portion of bark, about an inch wide, is peeled off. The part is bound with flax; then put into a box (which may be made extempore, about a foot square, or smaller), filled with earth, and watered daily, or as often as may be required to keep the soil moist. At the end of six months, if a lemon tree, or of ten or twelve, if an orange, the branch may be cut off from the parent trunk: two or three days previously the earth should not be watered, that it may be pretty dry and firm for removal. The box must be carefully taken to pieces, and the branch immediately planted. The part of the branch so treated has thrown out a vast number of roots, both above and below the decorticated portion; the lower roots decay and fall off, whilst the upper remain and increase, and support the detached branch, whether it be in leaf or flower, or bearing fruit. The Chinese are said to employ a similar method."—*Davy.*

HOW TO DESTROY ANTS AND CATERPILLARS.—The following method of destroying ants and caterpillars, though old, is but little known, and very successful and simple. It consists in scattering spirits of turpentine over the places where the insects are, by means of a brush struck against the hand so as to cause the turpentine to fall out like rain. If the ants are in a pot, they will all leave if a litttle turpentine be applied, so as to form a circle round it. Soap and water has been long a famous remedy against caterpillars; but M. Manelle, to whom we are indebted for this article, finds that soap lather is much more efficient. A wet brush rubbed on a piece of soap produces, as is well known, a great quantity of lather, and if this be applied to the parts attacked by caterpillars, they are instantly destroyed. If the caterpillars cannot be reached with the hand, the soap may be applied to them by a horsehair brush on a long handle. The morning and evening, when the caterpillars collect together, are the best times for performing this operation.—*Flore des Serres.* [We presume that soft soap is here intended.]

THE CULTIVATION OF PEARS.—The cultivation of an early and a late variety of the pear on the same tree in a small garden where the walls are not extensive, is obvious; and even when there is a great extent of wall, when it is considered that it is mostly the south exposure that is used for the produce of early and late sorts of pears, in the climate of Scotland, the benefit is great. By having the branches of pear trees, alternately, one early, the other later, there are, as it were, two chances of success; the Jargonelle being very early in blossom, if that fails in consequence of unfavourable weather, the late sort flowering at another time may succeed. Another advantage arises from the crop coming in at different seasons. The Jargonelle ripens off before much effort is required from the tree to support the late sort, so that the tree is more capable of supplying nourishment to half a crop of Jargonelles, than if the crop were all of that sort; and as the early pears are all gathered before the late sort begins to swell to size, the tree is at once relieved from half its crop, and in that case more enabled to mature in greater perfection its late produce. My experience in the practice enables me to state that the trees produce finer fruit in this way than if they were all one sort.—*D. Montgomery.*

MODE OF GROWING APPLES IN GOZO.—"The steep declivities of the sides of the hills, presented a succession of terraces, which, rising rapidly one above another, all on a very small scale, gave an idea of the seats of an immense amphitheatre, and the curved lines of the opposite hills strengthened the idea. These little terraces were prettily planted with fruit-trees, especially the apple and vine intermixed. They were well pruned and kept low; few, even of the apple trees, were larger than gooseberry bushes. In full bloom at the time, and covering so considerable an extent of ground, they made a singular appearance, reminding me of home, and at the same time assuring me of being abroad. Perhaps this mode of cultivating the apple (probably borrowed from the mode of cultivating the vine) might be employed in many situations in England and Scotland, with advantage, especially where the winds are strong, and the exposure bleak and cold. Kept low, and so near the ground, the trees would be better sheltered, and the fruit would ripen sooner and more perfectly."—*Davy.*

RANK STEAM (TO PREVENT.)—Instead of filling the lights with glass in the usual way, have two blank squares of wood in the top of the lights, in the centre of which is a hole cut one inch in diameter, and covered with a piece of tin or lead, so fastened as to turn with ease. These are opened as they may be required.

THE FUCHSIA.

There is very little difficulty in growing fuchsias in perfection; as they ought to be neat, compact, well-furnished plants, blooming all over, and full of leaf, as well as of flower. The soil best suited for this flower is three-fourths turf loam, and the other fourth peat. If you have none but plain loam, without the turf having been rotted in it, in quantity, let it be half loam, one-fourth leaf mould, and one-fourth peat. In the absence of leaf mould, use dung thoroughly rotted in mould. All the fuchsias we have seen have been grown too fast for their beauty, and it may be safely taken as a rule in plant-growing, that if they be excited too much, they grow thin in foliage, the leaves being farther apart, the branches thinner, the plant more naked, and in spite of all that can be done, more ugly. In a large sixty-sized pot of this stuff, well drained, put your small plant or struck cutting, and let it be placed on a front shelf in the greenhouse, or near the glass in a conservatory, or for want of either, in a pit, and give air on mild days. As soon as the roots reach the sides of the pot, it may be changed to one a size larger. If the plant grow in a pyramidal form, and handsome, let it grow; if it makes a long shoot, and it gives no indication of side shoots, it must be shortened; but it will be a more handsome plant by far, if it grow naturally, and throw out side branches, without being checked at top. If any of the lateral or side shoots grow too vigorously for the rest, they should be checked at once, by shortening them. If the plant show bloom before it be grown as you wish it, the heads may be picked off, but generally speaking, you should not depend on one or half a dozen plants of a sort, so that if one should bloom out of season, it may be taken into the dwelling-house, or used as an ornament, though it were very unfit for exhibition. The fuchsia only requires to be grown in the natural way, without more heat than the greenhouse, or even in a pit without any, to be handsome, and wonderfully different to the things shown now, which in addition to the natural coarseness of a great many, are rendered doubly repulsive from their rank growth. It is the curse of floriculture, that size, even to vulgarity and coarseness, gets rewarded by horticultural societies. The seed of the fuchsia is contained in a pulpy berry; these may be squeezed, and the pulp removed by washing, when the seed, after drying, may be sown in pots or boxes, placed in the greenhouse in April, or when it is gathered. We prefer April, as the seedlings have not then to get through the winter in their young state. When they are large enough, they may be potted in small sixty-sized pots, and great attention must be paid to the watering, as small pots soon dry up. Continue shifting them as often as the roots touch the sides, and let them all have the sun until the height of the bloom.

Turnip Fly.—We have found that lime, lightly strewed over turnips (just up) before the dew is off in the morning, most effectually and invariably presrves the crop from the fly, &c. This, we know, will be useful to some of our readers.

Method of Increasing the Size of Vegetables.—A peasant, a native of Offenbach, who had been a long time celebrated for the extraordinary growth of his vegetables, was asked by what means he succeeded in accomplishing so desirable an end, and his answer was, that before he placed the plants in the ground, he steeped their roots for two hours in a mixture of rich loam, fowl's dung and water, and if a little gypsum were added to it, the produce would be still greater. We have tried the experiment, and can vouch for its efficacy—*Schelnberger.*

Method of Growing Cucumbers in Germany.—It is recommended by Val. Hettich, one of the most celebrated gardeners of Thuringia, to grow all cucumbers on espaliers, instead of allowing them to trail upon the ground, by which they obtain a watery, insipid taste. The cucumbers should be planted at the foot of a wall, having a south or eastern aspect, to which a trellis work can be attached, and to which the vines of the cucumber can be fastened as they shoot forth. Cucumbers of an extrordinary size, of a beautiful green colour, and rich and agreeable in their flavour, are obtained by this mode of treatment. But as it is not in the power of every one to possess a favourable situation for growing the cucumber on a perpendicular trellis, it is recommended to place a trellis horizontally on the ground, which can be effected at a very trifling expense, and lay the vines of the cucumber upon it, which protects the fruit from the dampness of the earth, and imparts to it a uniform green colour, without in the least detracting from the prolificness of the plant. A cucumber, to grow it in perfection, ought never to rest upon the ground; the lower part of the fruit thereby acquires a yellow hue, which greatly diminishes its beauty.—*Bernhard.*

THE APPLE.

THE apple-tree is of universal European growth, and is believed to have been introduced into Britain by the Romans. It was greatly cultivated in the gardens of the monasteries during the middle ages, and from that source the greater number of our cultivated varieties have drawn their origin. The crab, or wild-apple, is the type of the fruit when left to degenerate, and to which it would speedily return, but for constant culture or crossing. Culture, without crossing or grafting, is found to prevent an immediate return to the crab; and, therefore, when an improved variety is obtained, it will yield seeds productive of a similar variety. The extent, however, to which varieties may be preserved without crossing has never been accurately determined, as the practice amongst professional gardeners is not to risk degeneracy in the fruit, and they usually resort to one or other of the methods of grafting above-mentioned.

In regard to the general cultivation of the apple, it delights in a soft hazel loam, containing a small portion of sand. In such a soil the fruit will be found to attain its full size, colour, and flavour; the trees will be most productive and continue to flourish longer, and in such a soil disease will seldom attack them, if not hereditary, or brought on by accidental wounds, or wanton and unneccessary lacerations. Climate has much less to do with fruit-trees than soil. Hence we see productive and healthy trees growing with little care at no great distance from others, which greater care can scarcely keep in existence. This is the direct effect of soil; the effect of climate would not be so obvious within a few hundred yards, where the shelter and situation are the same.

Deep soils are not necessary for the apple-tree, but rather the reverse; a dry bottom is indispensable. Eighteen or twenty inches of good soil, upon a dry substratum, such as chalk or rotten rock, is enough; the same upon a gravelly bottom is, however, to be regarded as a minimum depth, for the roots of fruit-trees should never be allowed to penetrate such a subsoil. In order to guard against this, it is necessary to pave the bottom of the border, for a considerable distance round where the tree is planted, with stones, slates, flags, tiles, or a composition floor of cement, to prevent the roots from penetrating beneath, thereby getting into a cold and poorer soil, and too far from the action of air and the heat of the sun, which are beneficial to them when they tak a horizontal direction, and keep near to the surface. The young wood, in these cases, will always be found to be more moderate in growth, and better ripened, upon which depends so much the production, not only of good fruit, but also of healthy trees.

Wet bottoms are to be guarded against by draining, by planting high, and by the precaution of using a pavement, or floor of some sort, as already directed. Wet soils are more to be guarded against than dry ones. For, although in some cases the apple may prosper for a few years in such, we invariably find that the most productive and most permanent trees are found in dry soils. In very wet situations, or in such as cannot possibly be rendered dry by draining, it will be desirable to plant on the surface, and gather up a slight mound of good mould over the roots; these mounds should afterwards be regularly mulched by laying a covering of good rotten dung over them to exclude drought, and also to nourish the roots, which in this case, having so small a place to run into, will require some enrichment.

The apple which is now under our immediate consideration is of English origin, and was first brought into notice by Mr. Kirke, of Brompton, who may be said to be one of the most extensive cultivators of the apple for which this country has been so distinguished. Although the Lord Nelson apple has been in cultivation for some years, its merits do not appear to be sufficiently known, as we have not observed it in many gardens remote from the metropolis. As a great bearer and excellent fruit, either for the dessert or kitchen, it has few equals, and certainly should find a place in every collection, however select.

The fruit ripens in November, and keeps till March, or longer; middle-sized, yellowish, and red when ripe, somewhat transparent, and very weighty in proportion to its size. The leaves are downy on the under side, small, longish, and shining; brackets at the base of the leaves, oval, sometimes falcate; wood, whilst young, red and strong, slenderer as the tree becomes older.

The varieties of the apple are very great, the catalogue of the Horticultural Society now enumerating 1,600. It is divided into three sections, the summer, the autumnal, and the winter.

SECTION I.—*Summer Apples.—Division* I.—*Round, or nearly so.*—Early Red Crofton; Margaret; Red Astracan; Red Quarenden; Summer Golden Pippin, White Astracan; Borovitsky.—*Division* II.—*Conical or Ob-*

long.—Dr. Helsham's Pippin; Early Red Margaret; Sugarloaf Pippin.

SECTION II.—*Autumnal Apples.—Division I.—Round or nearly so.*—Cole Apple; Franklin's Golden Pippin; Sutlow's Fall Pippin; Alexander Golden Pippin; Hawthornden; Hughes's Golden Pippin; Hoary Morning; Kerry Pippin; Padley's Pippin; Summer Broaden; Wormsley Pippin; Scarlet Crofton; Red Ingestrie; Nonsuch. —*Division* II.—*Conical or Oblong.*—Summer Pearmain; William's Pippin; Monk's Codlin; Scarlet Pearmain; Transparent Codlin; King of the Pippins; Keswick Codlin; Gray Leadington; English Codlin; Dutch Codlin; Dowell's Pippin; Alfriston; Beauty of Kent; Downton Pippin.

SECTION III.—*Winter Apples.—Division* I.—*Round or nearly so.*—Belle Griseldine; Belvoir Pippin; Blenheim Pippin; Borsdorff Courpendu; Court of Wick Pippin; Fearns Pippin; Easter Pippin; Dutch Mignonne; Canadian Reinette; Fenouillet Rouge; Fulwood; Yorkshire Greening; Winter Colman; Striped Beaufin; Newton Pippin; Holland Pippin; Kirk's Lord Nelson; Golden Reinette; Golden Harvey. —*Division* II.—*Conical or Oblong.*—Winter Red Colville; Ribston Pippin; Royal Pearmain; Winter Pearmain; Royal Reinette; White Spanish Reinette; Belle Bonne; Adam's Pearmain; Bedfordshire Foundling; New York Pippin; Lamb's Abbey Pearmain; Lemon Pippin; Forman's Crew; Gravenstein; Braddock's Nonpareil; Pitmaston Nonpareil; Sykehouse Russet; Royal Russet; Irish Russet.

The varieties of apples cultivated in this country are too numerous, less attention having been paid to selection than collection. It may be safely asserted that, in a well-selected garden, thirty-five sorts, if well selected, will afford a much better supply than is often obtained from the cultivation of a much greater number unselected for their merits, either as regards early ripening, long keeping, or their fitness for the soil and situation of the place. In small gardens, a still more limited number may be grown, or several sorts may be grafted on the same tree.

Where variety is desired, there cannot be a better mode adopted than that of having several kinds growing on one tree. It is much better than planting too many trees, which, in small gardens, not only injure each other, but to a considerable degree prevent the cultivation of anything else.

A very good selection of apples for an ordinary garden may be considered as follows:—

Early Red Margaret; Summer Golden Pippin; King of the Pippins; Old Golden Pippin; Franklin's Golden Pippin; Keswick Codlin; Hawthornden; Ribston Pippin; Golden Harvey; Royal Pearmain; Margil; Court of Wick; Old Nonpareil; Norfolk Beaufin; Dutch Mignonne; Sykehouse Russet; Scotch Nonpareil; Royal Russet; Blenheim Pippin; Courtpendu Plat; Yorkshire Greening; Claygate Pearmain; and Easter Pippin.

BEAN CULTURE.

To the EDITOR: *Sir,*—As your valuable little work may, in all probability, fall into the hands of some cottagers, like myself, who require to make the most of their little garden, I shall detail a plan I have pursued for some years past with very great success. In planting out my early York cabbages in October, I leave a distance of from fifteen to eighteen inches between the plants, and manure well. After putting the mould up to them in February or early in March, I plant, with a dibble, a bean between every cabbage plant, and as the bean stalks, by this culture, grow very tall, I top them as soon as they come into full bloom, and sometimes, where very strong, I take off some of the upper blossoms with the top; by this means I have a much more abundant crop, and much earlier. As my cabbages are ready for use before the beans are ripe, I pull up, not cut, the stalks, and dig up and manure the space between the rows of plants, and put down another cabbage plant; this, by changing the ground and reversing the rows, I find an excellent plan in any ground not perfectly loose. My beans are quite off the ground in time for putting up the mould to my second crop of cabbages. If the beans have been brought forward for transplanting as you describe at page eighteen, it will be found a very great advantage, as I have had them grow better in this way than any other, as the cabbage plants afford them shelter until they have struck firmly into the soil. If you think this worth a corner in your next number, I may, perhaps, send you something more for a future number.

I am, Sir, Yours, &c.,

Tullamore. W. F. RANKIN.

Steam and Agriculture.—The question involved in the construction and working of the steam carriage engine, is its commercial utility. The view taken by Mr. Adams and Mr. Samuel is, that by the adoption of it two advantages will be secured—the one, that many of our branch lines may be worked at one-half the present cost, both with respect to the outlay for stock, and wear and tear of the road, and that a large per centage of saving of coke will also be realized; the other, that a double line of light rails may, if landowners can be induced to assist in the construction, be laid down for five thousand pounds per mile, working stock included. Mr. Adams and Mr. Samuel conceive that so cheap a construction would enable landowners to bring every large agricultural district into a high state of cultivation by affording them the means, in the first instance, of the cheap conveyance of manure; and in the next, a means of carrying their produce to markets from which they are excluded by distance and expense of transit.

Drainage and Irrigation.—Irrigation, properly carried out is simply the supply of water in excess to well drained land. The water is the beneficial agent—it is the water that does the good—the more water, we might say, the better. The water certainly does positive mischief if it be stagnant; it induces the formation of what are strictly vegetable poisons, and it hinders the access of the warm showers and the fresh air to the roots of plants; but it is even more especially because of what it does not do, because of the non-performance of the duties which properly belong to it, that when stagnant in lands, checks the growth of plants, for then the soil may be full of the richest store of food for plants, and yet the plant may starve amid it all, just as a man chained to a spot would do in the best filled larder if there were no means for conveying the food to him. In undrained land, each plant exhausts its locality of the food prepared for it, and though no poison were there to injure its vigour, it would ultimately die of simple starvation. But only establish a current of water through the soil, and its roots will have an inexhaustible supply kept up; every drop, as its store is taken, makes way for another laden with nourishment extracted from the soil and the air, and though the plant be chained, as it were, to one place, there is a continuous stream of food passing its roots, on which it must luxuriantly flourish. And irrigation acts just in the same way; it is to the continual supply of fresh nourishment which running water keeps up that its effects are mainly due.

Feathers as Manure.—A correspondent from Essex informs us:—"In October last, having a field ready for sowing wheat, I manured one acre of it with ten bushels of old feathers, ploughing them in as they were spread, and from the success of the experiment, am persuaded there is no kind of manure for wheat or summer corn land to it. The acre so manured, produced equal to nearly six quarters of wheat, the other part only four on an average; the quality of the land was equal."

Preservation of Grapes and Plums.—At Berlin, grapes are preserved by cutting the bunch when ripe, with about one foot of the wood above and below the footstalk; the ends of the wood are dipped in hot pitch to keep in the moisture, and the bunch is then hung up in a dry place. The quetch plum is preserved till March by the following method:—Gather them when perfectly ripe and dry, put them in a glass jar or bottle closely tied up, and pitched so as to exclude the air, and then bury them in dry soil, seven or eight feet deep, so as to be out of the reach of any change in temperature or moisture; when taken out, they must be used immediately.

Destruction of Aphides.—The different kinds of aphis or plant louse are very troublesome. Such plants as calceolarias, cinerarias, pelargoniums, &c., suffer much injury from the green fly, if they be not speedily dislodged, and other kinds attack out-door crops. For, in doors, or wherever the smoke can be confined, fumigation with tobacco is the best plan of destroying them, and a calm evening is best suited for the operation. The houses or other places are to be closed, and then filled with the smoke, and next day the plants should be syringed with clean water. The tobacco should be laid over a few red hot cinders in the bottom of a flower-pot, and then covered over with a good thickness of *damp* short hay, the pot being elevated upon two bricks, so that the draught of air may reach the hole at the bottom. In places where the smoke is offensive, and generally out of doors, the plants may be well syringed towards evening in the liquid made by adding to the tobacco liquor of the shops, four times its bulk in water; in the morning, this is to be syringed off with clean water. Whichever remedy is adopted, it is safest to have it repeated once or twice within a day or two.

Lettuces.—The best kind of lettuces for the present sowing are the white and green cos, or the imperial and brown Dutch. The seed should be sown in a warm border.

APRIL.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

THE FLOWER GARDEN.

FIRST WEEK.

Sowing Hardy Annuals. — The sorts which are now the most proper to be sown, are convolvulus, major and minor; the tangier and sweet scented peas, Moldavian balm, white alysson, cyanus, and nasturtiums; likewise lupins, larkspurs, flosadonis, and sweet sultans poppy, hawk-weed; also candytuft, dwarf lychnis, nigella; alkokongi, lobals catch fly, venus navel wort, and looking-glass, virgin stock, scarlet pea, crown pea, winged pea, dwarf and large annual sunflower, persicania, belvidero, &c. Let the above be sown in small patches in the borders, beds, pots, &c., to remain where they are to flower. Let them be frequently watered in dry weather, both before and after the plants come up. When they have been up about a fortnight or three weeks, let all the large growing kind be thinned, where they have risen too thick; observing to clear away the weakest, and leave the strongest plants standing, allowing each kind, according to its size, full room to grow.

Sowing Tender Annuals.—Make a new hotbed, wherein to sow seed, or transplant young plants of the best kind of the early raised annuals, sown in February or March, such as cockscombs, tricolour, double balsams, and globe amaranthus, egg plant, double stramonicum, sensitive plant, and diamond firesides, or eve plant, and marvel of Peru, &c. When these curious plants are required in perfection, they must be brought forward by the assistance of a regular hotbed heat, under frames and glasses; and when that is properly attended to, the plant will be large and beautiful by the latter end of June, or the beginning of July. Remember to refresh the plants often with moderate waterings. When the plants have advanced in height, near to the glasses, let the frames be raised at bottom about six inches, in order to give them liberty to shoot; and, according as the plants rise higher, contrive to raise the frames in proportion; or at each time of raising the frame, observe to close the currency below, by nailing the mats to the bottom of the frame.

Planting Deciduous Trees and Shrubs. —The planting of all deciduous trees and shrubs should be finished the first or second week in the month. In early seasons, this operation should be finished in March, unless the trees intended to be planted have been taken up and laid *in by the heads*, which will check their growth sufficiently to warrant their being finally planted out at this time.

Planting Evergreen Shrubs. — The months of April and August are the two seasons in which these shrubs are found generally to succeed best after planting.

Care of Hyacinths and other Choice Flowers. — Hyacinths and tulips, ranunculuses, and anemones will now be coming fast into bloom. The more curious and valuable varieties which are planted together in beds, deserve particular care; heavy rains, cutting or strong winds, and sharp frost, would do them much harm; and the sun, if permitted to shine on them fully, would bring on the decay of the flowers in a short time. If, therefore, they be screened from all those occasionally by a covering of hoops and mats, it will not only preserve the beauty of the flowers, but will continue them longer in bloom; the hoop must be kept constantly over the beds, and the mats or canvas always in readiness for drawing, or whenever it is necessary for the defence of the flowers. When the plants are in bloom, let the mats be drawn over the hoops every sunny day, about nine or ten o'clock, till four or five in the afternoon. The mats should also be drawn on when it rains hard and when the winds are strong; for such weather would beat down the flowers. The flowers should be sheltered every night, when there is an appearance of bad weather. The care of covering is only advised, for some of the more valuable sorts in beds to continue their bloom beautiful as long as possible; but in regard to the common sorts, leave them to nature. Bed and stage flowers, particularly tulips, hyacinths, and carnations, have generally coverings erected over them for shade and shelter during the time they are in flower. These are variously constrtucted and fitted up—most commonly with pots at the corners of the beds, connected by light ledges, and covered with canvas, reaching down to the ground on the south and west side. Sometimes they are made large enough to walk round, as well as the bed. They are, however, only temporary erections.

Polyanthuses.—The first week in this month is a good time for choosing and planting strips of fine polyanthuses. These may be planted out in a shady border of good earth, planting them into nursery rows, six inches apart, and three or four in a row; and moderately refreshing them with water till well soaked. They will be fit to transplant in July and August into any other situation; they will get well established before winter, and flower freely next season. Polyanthuses that were sown in pots or boxes last season may now be planted out into nursery rows, as above mentioned, or may be planted out at once, where they are to remain for good, as shall be thought most proper.

Auriculas will now be coming into full bloom, and those that are not on a stage frame must be carefully attended to, in order that they may be produced in full beauty, and that such beauty may be prolonged; they, therefore, should be shaded from the sun, from eight or nine in the morning, till three or four in the afternoon in clear weather, that is, if the situation in which they are placed be not fully shaded. They should also be effectually screened from rain, and from the wind, as the farina upon the bloom, which adds so much to the beauty of the flower, is easily displaced by it; they must be frequently and moderately supplied with water, but must not be watered overhead, lest the above-mentioned farina be washed off. Auriculas placed on a properly-constructed stage frame require less trouble and attention than in any other way. In short, they need only regular airing and watering. The sun can only shine upon them in the mornings and evenings, and never between the hours of eight and four throughout the day. If the frame be placed near to a wall, house, or to trees on the west side of it, the plants can only then have the sun in the morning, and if it be placed near to trees or buildings to the east of it, then only in the evening.

Tulips will now be coming into flower, and should be supported, as they advance, with small neat sticks, and covered, both from the bad effects of frost, heavy rains, winds, &c., as well as from the noonday sun, which, if allowed to shine upon them for any length of time, would tend considerably to dash off the colour and hasten the decay of the flower.

Sticking and Training Flowering Plants.—Go round and place sticks to all such plants as require support, and let them be well secured before they take an awkward growth, which work should be continued according as the plants advance in height.

Dahlias.—The dahlia is now one of the principal ornaments of the flower-garden. Their easy propagation by parting their tuberous roots, and the endless variation procurable by sowing their seeds, have made them favourite objects with the florist. The roots are preserved in sand, or on dry shelves in a room, safe from frost during winter, and planted as early in the spring as danger from frost will permit. Encourage the plants to produce early flowers, by pinching off all the secondary shoots. All other management of sowing, &c., is similar to that of the marvel of Peru, its fellow native. Since their introduction, and more especially since they have been ranked as florist flowers, they have engrossed a very large share of public attention, insomuch that, perhaps, there is no other plant in our collection which is of equal importance in a commercial point of view. In order that they may be increased and grown with more facility, the tubers are planted on a mild hotbed, or in the back bed of a hot-house at or a little before the time; and as shoots rise from the tubers, they are carefully slipped off by moving them to and fro out of their sockets, and then planted separately in very small pots, and plunged in heat to strike fresh roots. Here they are nursed and hardened by degrees till the end of May, when they are planted out in fresh and rich maiden loam to flower. New varieties are ever being raised from seeds.

Sowing Tender Annuals.—Tender annuals should be sown again this month, in order to succeed those which were sown last month. About the middle of the month will be a good time: however, if they were neglected to be done last month, let them now be done without delay. Those which were sown last month, or earlier in the season, will require to be forwarded, by being pricked out, and afterwards shifted into larger pots as they advance, and a regular brisk heat kept up in them, by renewing the linings or making up fresh hot-beds for them. so that they may sustain no check in their growth. It is a rule, which should never be lost sight of, that in growing tender annuals, particularly such as balsams, cockscombs, and globe amaranthus. The nearer the plants are kept to the glass the better, by which means they will not become drawn up weak, and flower in a premature state. Whilst the plants are in this state, let them have moderate supplies of water, with the chill taken off, as often as they may require it, all over-head, and let air be admitted daily, in such quantities as the state of the weather will permit. As the plant advances in height, so as to touch the glass, let the frames be lifted up a few inches at a time, and the practice should be followed up as they may require it. The soil in which tender annuals should be grown should be as rich and light as possible; indeed, balsams and some others are brought to their greatest perfection on entire beds of rotten dung. Good light mould, enriched with rotten dung, and frequently watered with liquid manure, will bring these plants to great perfection, if allowed sufficient pot-room, and regularly shifted.

SECOND WEEK.

SOWING AND PRICKING OUT HALF-HARDY ANNUALS.—Many half-hardy annuals may still be sown upon a slight hot-bed, and many of such as were sown last month may now, in mild weather, be planted out in the borders of the flower garden. The more tender of such may be pricked out in a nursery-bed, and be fit for final planting out by the end of the month, or beginning of May. The more tender kinds of these plants should be, when fit, pricked out singly into small pots, and on a little bottom heat, till the end of the month, when they may be planted out in safety.

CARE OF CHOICE BULBS.—If the finer sorts of bulbous flowers have not yet been sticked, dressed, and hooped over for the purpose of screening and shading them, it should not now be delayed by those who are curious about and anxious to have these flowers in perfection. Anemones and ranunculuses will soon also require the like care. The screen of mats or canvas should always be put on at night, and as a shade from the sun, in clear weather, from nine in the morning to three or four in the afternoon, exposing them on still, cloudy days, but defending the flowers at other times from high winds and heavy rains.

PROPAGATING HARDY SHRUBS BY CUTTINGS.—Many hardy deciduous shrubs will now succeed by this mode of propagating. The young shoots of last year's growth should invariably be made choice of, and cut into lengths according to the various sizes and kinds. By autumn, they will be fit either to plant out into nursery lines, or some of them may be sufficiently strong to plant out permanently in the shrubberries.

HYACINTHS.—Hyacinths, in beds, will now come into perfection; the flower stalks should be neatly supported with small sticks, to prevent the heavy heads of flowers from being broken. They will also require to be protected as already directed for anemones and ranunculuses.

PLANTING EVERGREEN HEDGES.—This is a proper time to plant evergreen hedges, as holly, evergreen privet, yew, &c., which should generally consist of plants that have been two years or so raised, and which may be planted at eight or nine inches apart, if stout and well-rooted; but if not so, plant at six or seven inches distant. Trench and dig the ground well, breaking it fine, and give it a moderate dunging. Small rooted plants may be planted with a dibble, but, otherwise, it is better to plant by line with the spade, that the fibres may not be crowded. If the weather be dry, the plants should be frequently watered, till they have taken fast root, and occasionally throughout the summer. Pyraeantha, or evergreen thorn, answers well for covering up an old wall, or the like; also evergreen privet, phillyrea, holly, or yew for thick screens, either against the wind or for hiding any disagreeable object. In either of these cases, it is of importance to get up the screens as fast as possible, and great pains should be taken in preparing and enriching the soil previously to planting, mulching, and watering frequently in hot weather

PLANTING BOX EDGINGS.—This is a proper time to plant box edging where wanted, and the middle or latter end of this month is to be preferred. If they be rooted plants, the best way is to lay, not to dibble them. The slips should be taken off singly, and the smaller or shorter the better; that is, slips from two to four inches in length, not cut, but gently torn off. They should be laid or dibbled in at an inch apart, and should frequently be watered till they have struck root, and have begun to grow; after which they will require no further care.

PANSIES.—This is the proper season for the formation of new beds for pansies. The old plants may be set in clumps in the borders. Seeds of new varieties should be sown and forwarded by means of heat. Particular care should be taken in the propagation of fine sorts, for which purpose take the suckers from the roots. They will thrive well in a gentle heat, or under a hand-glass.

STOCKS.—Plant out a considerable number, and bring on others to succeed them. The stocks now sown, will bloom finely in autumn. The soil must be rich and well worked.

THIRD WEEK.

AURICULAS.—If the sun be out during the day, shade the frames with open matting, or other material that will allow the rays of the sun to sparkle through on the plants. Laths strung together after the manner of Chinese blinds is the best and most convenient shading; being more cleanly, durable, and economical. The frames must be closed, and covered up at four o'clock, P.M., with three or four mats thick if the weather be cold, and opened about eight or nine o'clock in the morning. Auriculas delight to flower in a still atmosphere, but as air is necessary for their well-doing, the frames must be lifted on the opposite side from whence the wind blows; viz., if the wind blows from the north, raise the frame on the south side for air; and if from the west, raise the frame on the east side; by attending to this rule, you will avoid a great deposit of dust. As soon as you perceive the pipes of any of the trusses inclining to open, remove the plants from the frames, and place them under the hand-glasses, which ought now to be ready for their reception, thoroughly cleansed, the roof perfectly water-tight, and arranged under a north wall upon a temporary framework of wood, constructed in the following manner:—Prepare two parallel lines of pantile lathing, the width of your handglasses, or to any length you may require; drive a few pegs into the ground, and nail the pantile laths on the top of them; this will be sufficiently strong for the purpose. The height must not exceed four inches from the ground; boards must be provided to lay along the sides of the handglasses, to keep out the wind, &c., and the same attention as to covernig, &c., will be requisite, as described above. The raising of seedling auriculas is an interesting part of floriculture. The amateur should assist in the fertilising these plants; the process is simple, and more certain to produce seed than leaving it to chance, as is generally the case. I will endeavour to explain it, using the terms most familiar to the florist, viz.,—the thrum, so called, is the male part of the flower, and is attached to the petals of the blossom; the pin, so called, is the female part of the flower, and is attached to the seed vessel. By applying a small camel's hair pencil to the thrum, and collecting the farina, or meal (a fine yellow dust), on the point of the latter, and then applying it to the pin or female part, and gently shaking the dust on to the pin or female part, the operation will be finished. This should be performed in a close atmosphere, or the wind may drive away the farina.

TULIPS.—If the weather should b, unseasonably cold, and the buds advancing parties should be *very* careful not to omit covering their beds at *night*; one omission at this critical period might render all previous care and attention of no avail.

MAKING SLIPS OF CHOICE FLOWERS.—If slips of campanulas, rockets, stocks, and wallflowers, have not been made, it may still be successfully done; they may either be planted out to nurse on a shady border, or may be put into small pots, three or four inches in diameter, to be repotted the following month. In the former case, the ground should be pointed over and be broken fine, planting in lines across four-foot beds, six or eight inches apart, and three in a line, keeping the earth just a little moist about them, till they have struck, and afterwards watering more freely. Those to be potted should be planted in fine light earth, one in each pot, and should be carefully watered and shaded till they have struck root; they may then be placed in open, sunny situations, and must be frequently watered, perhaps once a day, or in two days, according to the state of the weather. They will be fit for repotting in five or six weeks.

RANUNCULUSES AND ANEMONES.—The more valuable varieties of ranunculuses and anemones will now be coming into bloom, and, if planted in beds can be readily protected from the effects of cold cutting winds and frosts, which would be liable to injure them materially, by covering them with hoops and canvass. This covering should also be permitted to remain on during the hours of strong sunshine, which, if not prevented, would, after they came into flower, tend in a short time to bring on decay in the flowers; but if screened from all these occasionally, it will not only preserve the beauty of the flowers, but will continue them longer in bloom.

ANNUALS.—Those which have been kept in frames should now be hardened off, and those of the hardy kinds planted out. Towards the close of the month, the half-hardy kinds should be shifted, and placed out in a good situation; the best should be preserved to flower in pots. The wind, cold, and sun being injurious to newly transplanted plants, they should be protected by inverted pots, or fir or other boughs. Quick lime may be strewn around them, to keep off the vermin.

HOLLYHOCKS.—They should be planted in a rich soil; a hole should be dug for each plant about two feet deep, at the bottom of which should be thrown three or four spadefuls of strong stable manure.

DAHLIAS.—The dahlia may be planted this month, though by some the operation is delayed till May or even June. Whenever the dahlias are planted, the tubers of the dwarf kinds should be about three feet apart, but the larger sorts should be four or five feet from each other every way. The soil should be a sandy loam, not too rich, lest the plants should produce more leaves than flowers; and not too poor, lest the flowers should be poor also. A bed, dug about two feet and a half deep, with a layer of rubbish at least six inches at the bottom, and filled with two parts of fresh sandy loam, and one of thoroughly rotten dung, is admirably adapted for these plants.

TUBEROSES.—Some of the kinds of gladiolus and ixia, and other showy autumnal flowering bulbs, may be planted towards the end of April, or the first week in May. A bed should be prepared for their reception, by digging the ground about a foot deep, and taking out about half the soil, which is to be replaced by equal parts of vegetable mould and well-rotted dung. When this is well dug over and mixed, drills should be drawn in it about three or four inches deep, and eighteen inches apart, in which the bulbs, after first taking off their offsets, are to be placed, about nine inches apart. The bulbs should be made quite firm in the soil, and then covered with mould an inch or an inch and a half deep. They will not require any water till a week or ten days after planting, when the roots have begun to grow; but after that they should be watered regularly.

PANSIES, for autumnal flowering, may be sown this month. or cuttings may be made of favourite kinds. The pansy requires a shady situation, and a rich loamy soil plentifully supplied with water.

MUSK PLANTS.—This is a plant very easily propagated, and has become a great favourite in the windows. In open gardens it forms an excellent summer bordering, and succeeds best in a shady place. This plant is very tenacious of water overhead, but it requires much water at the roots.

MANAGEMENT OF POTS OF PERENNIAL PLANTS IN GENERAL.—Give fresh earth to such pots of perennial plants as were not dressed and new earthed in March.

PLANTING AND PROPAGATING PERENNIALS.—Most sorts of perennials and triennials, of the fibrous-rooted tribe, may yet be planted, and many sorts propagated by offsets.

SLUGS AND OTHER VERMIN.—Examine well the plants, and destroy all vermin and caterpillars as they appear, by watering them overhead with a watering-pot or syringe, with tobacco water. Once or twice watering in this way, however, will generally be found sufficient for the season, but as often as they reappear, repeat the waterings; it is neither troublesome nor expensive. Where they abound, sprinkle the ground with tar water; it is instantaneous death to them.

FOURTH WEEK.

TEN WEEKS STOCKS AND MIGNIONETTE.—Mignionette and ten weeks stocks may now be sown in any warm borders, or in pots for transplanting.

CARNATIONS IN POTS.—The best carnations in pots should have a good share of attention. Keep the pots free from weeds, and let the earth be stirred if it becomes hard, for this will encourage the plants to shoot, and give an air of neatness. Water tho pots often in dry warm weather.

EDGINGS OF BOX AND THRIFT.—Box and thrift may yet be planted tor edgings to beds or borders, and it will take root and grow freely with a little water in dry weather.

SOWING HARDY ANNUALS.—Annuals of this description may still be sown in the flower garden borders, where they are to remain to flower, and a few may be sown in the reserve garden, to be transplanted in May or June, to fill up vacancies where they occur.

Earthing and Dressing Plants in Pots.—The choice campanulas, rockets, stocks, and wall-flowers, in pots, that have not been dressed and unearthed, should now have that done without loss of time. Attend to these and all other flowers in pots in the article of water, and keep them free from weeds, stirring the surface of the earth with the point of a stick at times, as it gets hardened, which greatly encourages the plant, and lets the water more freely down to its roots.

Planting Carnations.—Carnations, not yet planted into the borders, beds, or pots, where it is intended they should remain to flower, may still be done, but should be performed in the middle of this month at latest; remove them with balls, and give water as soon as planted.

Dressing off the Shrubbery.—Let every part of the shrubbery be trimly dressed at this time. Shrubs of all kinds will now begin to look gay and beautiful. This beauty may be very much heightened or depreciated, according to the state in which the ground and walls are kept. Weeds form no part of that beauty. Ground, neatly and recently raked, serves as a foil to show it off to advantage.

Pinks.—Stir the surface of your beds, and top dress as speedily as possible, that the spring roots may receive the benefit. If your soil be of a sandy or open quality, *cow* manure will be the *best;* where the soil is of a stiffer or more retentive nature, *horse* manure will be found most beneficial; if neither be at hand, any *fresh* and *sweet* soil will assist them.

Carnations and Picotees.—Attend to the weeding and watering; you must not suffer the surface of the soil in your pots to become hard or close, which will often occur from frequent waterings. Whenever you observe this to be the case, stir them immediately; it is very important that the surface of the soil should be kept open. If you have any yet unpotted, we beg to remind you that it is getting very late. Three months is but a short time for these plants to establish themselves sufficiently to produce fine blossoms.

Planting and Sowing Polyanthuses.—Polyanthuses may still be planted and also propagated by rooted slips, and the seed may be sown. Let the seed be sown on a border of light earth, not much exposed to the sun; sow it pretty thick, and when the plants come up, keep them from weeds, and give light waterings in dry weather, and in July or August, prick them out on a shady border, three inches asunder, giving them some water.

THE FRUIT GARDEN,

AND GREENHOUSE.

The Management of Seed-beds.—Water occasionally the see-beds of all kinds of trees and shrubs in dry weather, both before and after the plants begin to appear. Observe, at all times, to water these beds with moderation: a little, and often, must be the rule. Shade will also prove beneficial in the middle of hot sunny days to the choice seedling trees and shrubs, about the time of their first appearing, and for some time afterwards.

New Budded Trees.—Budded trees should be looked over about this time. All shoots which put out from the stocks, besides the proper inserted bud, must be rubbed off as they are produced, that the whole efforts of the stock may go to the support of the bud shoots.

Hoeing and Weeding.—Hoe and destroy weeds between the rows of young trees. They will now rise abundantly from seed, but by applying the hoe or hand to them whilst young, they may be very expeditiously destroyed.

Support still the requisite degree of heat in the hothouse, by the aid of moderate warming fires and a constant good heat in the bark bed. The temperature should be gradually advanced to seventy and seventy-two degrees, and air should be admitted every day, if the season will admit.

The pine-apple plants now demand daily attention; they must be often refreshed with water, and must also have fresh air on warm sunny days.

As the fruiting pines will now be advancing in young fruit, and in some the fruit will be advanced into tolerable growth, they should be properly assisted with requisite heat, both in the bark bed and by fire, and with necessary refreshments of water, &c. But it will now be necessary to observe, that if there was no fresh tan added to the bark bed in March, it must now be done in the first week in this month.

Succession Pine Plants.—The pine plants in the succession-house or pot, which are to bear fruit next year, must now be shifted into larger pots, if not shifted last month. The pots for this purpose must be of those sizes called twenty-fours.

The plants are to remain in the above pots till the end of July or some time in August, and then be removed for the last time into the pots where they are to fruit.

NURSERY PLANTS.—Where the crowns and suckers of young pines, the progeny of the last year's fruiting plants, have filled the small pots with their roots, let them, some time this mouth, be shifted into pots a size larger.

PROPAGATING STOVE EXOTICS.—Now propagate various sorts of exotics by cuttings, layers, and suckers, according to the natnre of the different kinds, planting them in pots, and placing them on the bark bed, which will promote their casting freely in a short time.

Likewise sow seeds of any kinds of hothouse plants raised by that method: sow them in pots, and plunge them in the bark bed.

Also in the hothouse, very expeditiously strike cuttings, both of many sorts of greenhouse plants, as myrtles, &c.; likewise of any curious shrubs of the open ground, plunging the pots in the bark bed.

Several kinds of stove plants, such as the cactus, &c., seldom flower, owing probably to their not receiving a sufficient quantity of fresh air; let such, therefore, be placed in the open air, along with the greenhouse plants, and the exposure, which acts as a kind of check to them, will very likely throw them into flower.

The temperature of a stove should always be kept at or above sixty degrees of Fahrenheit, but never above seventy degrees. On fine days fresh air should be admitted, always attending to shutting up early in the afternoon. If the house be easily heated, either by fire-flues or hot water, there is but little need of a bark bed, except only for maintaining the requisite degree of heat. Neither do many of the stove plants require planting or any fermenting material, as they may be kept equally healthy on shelves. A command of steam is, however, particularly necessary for a stove collection, especially in summer, when insects are prevalent. The green fly *(aphides)* is killed by fumigation of tobacco; the red spider *(acarus)* by smearing the hot flues with white wash in which sulphur vivum is mixed.

CARE OF PLANTS FORCING IN THE STOVE.—To plants now forcing, such as kidney beans, strawberries, flowers, &c., be careful to give proper waterings, and early in the month introduce more in succession.

Vines in hothouses, now in full fruit, continue to keep well cleared from all improper shoots, and the others trained in closely and regularly.

SUMMER DRESSING OF VINES.—Vines against the walls should be looked over about the latter end of this month; they will by that time, if a forward season, be advancing in numerous spring shoots, and the useless ones should be displaced.

In looking over the vines, observe at the time to displace only such shoots as appear to be absolutely useless. There generally arise many small shoots from the old branches; but as these from the old wood seldom produce grapes in the same year, let most of them be rubbed off close, except in such places where a supply of new wood is, or will apparently be wanted, and leave for the present all the shoots which arise from the last year's wood, or same year's bearers; but where two shoots arise from one eye, take the worst away. The remaining one will still grow stronger, and its fruit be superior in proportion.

PROTECTING THE BLOSSOMS, &c., OF WALL FRUITS FROM FROST.—Continue to defend the blossoms and young fruit, or wall trees, particular those of the choice sorts of apricots. Peaches and nectarines, &c., where sheltering of these trees is practised, it should be continued occasionally all this month, for although there may happen to be some fine warm days and nights, yet the weather is sometimes so very inconstant, that we often have such severe frosts as to prove the destruction of the blossoms, and young fruit or trees that are exposed. Therefore, in unfavourable springs, when there is an appearance of frosty nights, &c., the shelter should be continued with mats, &c., till the fruit is as large as the end of the little finger; and even then they are not always past danger, as is often experienced.

They might be protected either with bunting curtains, mats, taken down, or rolled up and fastened in fine mornings, or with large nets to remain day and night; if cuttings of evergreens be used, as laurel, yew, &c., as advised last month, let them remain till the fruit be past danger.

RUBBING OFF THE USELESS BUDS OF WALL TREES.—Begin to look over apricot, peach, and nectarine trees, about the latter end of this month, and cut off the new advancing, ill-placed, foreright, shoot buds, and other irregular growth, and such young shoots as are useless; that is to say, all shoots which are produced directly foreright, or the front of the branches should be rubbed off close, likewise all such as arise in parts of the trees where they are evidently not wanted, and such as are situated in places where they cannot be regularly trained to the wall. Let it be observed, however, that all regular placed side-shoots and leaders, and such others which are properly situated for laying on, must be left, and should, when of due length, in the two succeeding months, be entirely removed or trained to the wall in a regular manner.

THINNING WALL FRUIT.—Thin apricots when they are produced too thick on the trees, especially where they are in clusters, and the young fruit a little advanced in growth, nearly as big as the largest peas, or the end of the little finger, which they sometimes are by the latter end of this month, which will be time enough to begin that work.

Leave the most promising and best-shaped fruit; but do not leave the fruit so close together as, in their advancing growth, to thrust one another off the branches. The fruit thinned off may be saved for tarts, which at this time will be highly acceptable.

NEW GRAFTED TREES.—New grafted trees should now be often looked over, to see if the clay keeps close about the grafts, it being apt to crack and sometimes fall off; when it is found to be defective, let the old clay be taken off, and add some new in its stead.

All those shoots which are below the graft must be taken off as they are produced; these, if permitted to remain, would rob the graft of nourishment, and prevent it shooting freely.

NEW BUDDED TREES.—Look over also new budded trees; that is to say, those that were budded last summer; they will now begin to advance their first shoots, to form the beginning of the future new tree. If the leaves curl up, insects are the cause of it, and if not prevented, will spoil the shoots in their first growth; let the curling leaves be carefully picked off, to prevent the increase of the injury; do not suffer any shoots to remain that come from the stock.

FIGS.—Take care not to uncover the figs too soon in the spring, and it should be done partially, as frequently there are frosts and cutting winds in the months of April and May, which will infallibly kill the young fruit, which are formed in the previous autumn.

STRAWBERRY BEDS.—Strawberry beds should now be kept perfectly free from weeds. Runners should be constantly cleared away as they advance; but where new plantations are wanted, let some of the first produced runners remain till June, in order to form young plants then to be transplanted.

Water the beds of fruiting plants frequently in dry weather, towards the latter end of the month, when they begin to advance for bloom, for if they are not so supplied, the fruit will be smaller, and in less abundance; the fruit is often devoured or disfigured by snails and slugs. In order to get rid of these pests, it is a good plan to drench the strawberry beds and rows of plants two or three times with pretty strong lime water, that is, water impregnated with the caustic qualities of the lime. Slake half a peck of unslaked fresh lime in fifteen gallons of water, stir it till the lime is dissolved, and let it stand till quite clear, when it is ready for use.

ALPINE STRAWBERRIES.—Sow some seeds early in the spring in pots, which place in a hot-bed of moderate heat, about the middle or latter end of April; when they have acquired a proper size for that purpose, remove them into the open ground, where they are to remain. They will ripen their fruit generally towards the end of July, afford an abundant crop of fine fruit in autumn; and even so late as the second week in December, they will show a profusion of blossoms and immature fruit. It is the opinion of many, who think from this management succeeding so well, that the Alpine strawberry should be considered and treated as an annual plant.

The roots of the scarlet strawberry, affording a crop of fruit in the hothouse early in the spring, will, if carefully removed out of the pots or boxes, and placed in the open ground, yield another crop of fruit in September. This second crop is very abundant, the warm rains of July and August proving highly favourable to the growth of the fruit; and as there is no other strawberry to be had at this season of the year, except the Alpine, the addition of the scarlet makes a pleasing variety in the dessert.

Strawberries which yield their fruit in June may be made to flower and fruit in the autumn, if divested of their spring flowers; this may be in almost all establishments a most useful expedient.

FIG TREES.—Those fig trees may now be uncovered which were screened from frost during the preceding winter; but this should be done by degrees.

THE KITCHEN GARDEN.

FIRST WEEK.

ARTICHOKES may still be dressed, and new plantations of them made with success.

ASPARAGUS.—If the beds or rows of old grass have not been dug or forked, the work should no longer be delayed, as the roots will all be in a state of vegetation, in which case, both those and the buds, or crowns, are very easily injured. The beginning or middle of the month is still a proper time to sow asparagus, rather for transplanting, or when it is to remain for good. In dry weather, let both the new plantations and sowings be frequently refreshed with water, and keep them clear of weeds and all stones.

BEANS.—Still plant more beans for a succession to those previously sown, and earth the crops already sown, according to their needs, carefully destroying all weeds that may appear among them.

SCARLET RUNNERS may now be sown for a principal crop; but as they are more tender than the dwarf sorts of French beans, and very likely to be injured by the frost, it may be as well to delay this sowing till towards the end of the month. Plant them three inches deep in drills from four to six feet apart. As it is now known that scarlet runners are perfectly perennial, the crop may, therefore, be taken up in autumn, when the crop is finished, and preservad till spring in a similar manner with dahlia roots. By this mode the produce will be equal to that of plants originated annually from seed; but they have this advantage over the latter, that they do not grow so large, and, therefore, do not require so much space to grow in.

CABBAGES.—Sow and plant successional crops of all kinds of cabbages, and earth-up or close those already planted, according as they may require it. Transplant, if not done in March, all the cabbage plants yet remaining in their winter beds, or all that you intend placing out finally this spring for the summer and autumnal crops, and let it be done as soon as possible, that they may get good root before dry weather sets in. Give the plants a little water as soon as planted.

CARROT.—Now sow carrot for a full crop. The best sorts are the early horn, orange, long red, and the altringham. In order to make the seeds separate, they should be well rubbed or thrown amongst a little dry earth or sand, sowing thinly and as regularly as possible. When young carrots are required for soups, which is the case in the majority of lage families, successional sowings should be made in May, June, July, and August. Of course, these sowings will be upon a scale limited to the probable demand, a piece of from fifty to eighty feet square will afford a sufficient supply for the largest family. The early horn is to be preferred for the purpose. Carrots are found to succeed well in a peat soil, without any mixture of sand and very little dung.

LETTUCE.—Transplant cos and Silesia lettuces, or any other sort where they stand close. Choose a spot of good ground, and if moderately dunged the better. Dig the ground, and rake the suface smooth, then plant the lettuces about ten or twelve inches distant each way: water them immediately, and repeat it in dry weather till they have taken deep root.

RADISHES.—Thin the general crop where they have risen too thick, leaving the plants about two inches asunder, and clear them from weeds.

SPINACH AND BEET.—Sow spinach for successional crops in May and June, where a constant supply of the plant is required; seed should be sown once a fortnight, as the spring sowings soon run up for seed.

CAULIFLOWERS for a successional crop may be sown any time this month in an open situation; also on an open rich spot plant for a full crop of those plants sown in February; allow them twenty or twenty-four inches each way between the plants, according to the quality of the soil. Do not plant too deep, and give a little water to each if the weather be dry. Hoe and earth up the cauliflowers planted in February, or the first of last month, and attend to those under hand or bell-glasses, with respect to airing and watering them. As the season advances, they will require to have air from morning to evening, and to be frequently refreshed with water. Prick out a parcel of plants sown last month—this should be invariably done with every sowing of cauliflowers, brocoli, &c., as it greatly strengthens the plants, and makes them put out many more fibres than they otherwise would.

CELERY for a full crop may be sown the beginning of this month. Sow the solid Italian kind, and on a light open spot of ground, watering often In dry weather.

ONIONS may still be successfully sown, and the more so in dampish soils, but the sooner in the month the better, or if the autumn proves unfavourable, they may not fully ripen, and of course would not keep well. Let the early spring sown crops that have risen, be carefully cleared from weeds, also the winter crops. At the same time, now finally thin out these to three or four inches square, as towards the end of the month, or first of May, they will begin to button. At this time, also, pick out the heart-buds of such as are offering to shoot for seed, which must be repeated as they appear. This will cause them to apple or button as well as the others, and produce fully better-keeping onions.

Peas.—Sow more peas for a succession, and earth up the other crops that need it; also stick those most forward, before they begin to be beaten by high winds. If there be no sticks for the purpose, two lines of strong pack thread or spun yarn may be run along on each side of the rows, fastened to sticks placed at the distance of six or eight feet from one another.

Turnips.—Turnips may be sown any time this month for a full summer crop; this seed is of quick growth, and the plants will appear in a few days, which should be done in an open spot, moderately thin, and as equally as possible; tread it down regularly, and rake in with an even hand. Hoe and thin the early turnips sown the two former months, leaving the plants seven or eight inches distant from each other.

Rhubarb.—Rhubarb should be sown the beginning of April, to furnish plants for forcing. Choose an open spot of rich, mellow ground, sow the seeds rather thinly, tread, and rake them in; soon after they come up, thin them out to nine inches apart, and when their leaves begin to decay in winter, they will be ready for potting singly, or planting in boxes. There is manifest advantage in raising rhubarb seedlings, not only because we thereby gain a great number of plants, either for placing in the open ground, or for forcing, but because we have chance of originating a new variety, superior, perhaps, to any at present known. The characteristic value of any variety of rhubarb for culinary purposes consists of its earliness, bulk of leaf stalks, and appreciable qualities of the same as an eatable. Many new varieties have been lately raised from seeds; the goliah is one universally admired for its bulk and remarkable quality; and there are others more powerfully medicinal than the generality.

Leeks may still be sown for a full crop, and if sown about the beginning or middle of the month, will succeed very well; water immediately, if the weather be dry, and repeatedly.

Planting Pot and Sweet Herbs.—Plant rooted slips of balm, penny-royal, camomile, &c., in the herbary or place where they are to remain, six to eight or nine inches distant.

Mint succeeds very well, planted the beginning of this month; the method of planting is, by slipping the young plant, or by cutting off the stalks. Root slips of tansy and tarragon may now be planted; likewise, pot marjoram, burnet, chives, and sorrel.

Capsicums, Love Apples, and Basil.—Sow capsicums and love apples for their fruit to pickle, and for soups. The capsicum is a tender plant, and the seeds require to be sown in a hot-bed and in frames; when the plants appear, let them have a large portion of air, and water them frequently. In the middle or latter end of May, they will be fit to transplant, which must be into beds of rich earth.

Jerusalem Artichokes.—Plant Jerusalem artichokes when required; the roots will thrive in almost any soil, and multiply so exceedingly, that it is not easy to clear the ground of them again, for the least bit will grow; they are raised by seeds or cuttings of the tubers.

Parsley should now be sown, it will make a useful edging, if not suffered to grow rank, especially the curled parsley. It should be sown in drills, and the seed applied rather copiously. It is a seed that takes a long time to vegetate, and is rather uncertain in its growth.

SECOND WEEK.

Asparagus.—Fork asparagus beds which have not yet been done. Let this work be done, at the furthest, the third week in this month, for young shoots will now be forming in great forwardness. Asparagus may yet be planted; the plants will take root freely, but finish by the end of the month, for they will not succeed if planted later.

Dressing and Planting Artichokes.—Where artichokes were not dressed and slipped last month, it should now be done, for their spring shoots will be shot up a little through the ground. Plant artichokes when wanted; they will yet succeed, and have fruit the following autumn, provided they be planted soon in the month.

Beans.—From the middle to the latter part of this month plant kidney beans for a first main crop. The proper sorts are the speckled dwarfs, dun coloured, Battersea and Canterbury dwarfs; allotting them a free situation, and lightish good ground; plant in drills an inch apart, and let the drills be two feet and a half asunder.

Beet.—The middle of this month is the fittest time to sow beet for a general crop; if sown earlier, it is apt to shoot for seed, when the roots get hard and are in a manner useless. Beet likes a deep, lightish eart moderately rich. It will thrive very well in rich sand, but in stiff shallow soils it sickens, and tho roots get forked, and canker. Do not sow with manure, except of well-reduced compost, as rank dungs induce canker. Trench or subtrench to the depth of eighteen inches, at least if you would have the root in perfection, and break tho earth fine if anywise heavy. After digging and trenching, roll the ground lightly, or tread it smoothly, and sow in drills thinly, an inch deep, and twelve or fifteen inches asunder, according to the quality of the soil. Cover with the hoe or the foot, and smoothe all with the rake.

Brocoli.—Sow brocoli any time this month to answer for autumn and early spring supply. Choose some early cape and early purple to come in for autumn; late purple to stand the winter, and the white or cauliflower brocoli. Sow them in an open space of light rich ground, each sort separate; the plants will soon come up and be fit to plant out in June. Sow also the seeds of the dwarf brown, the cream-coloured and sulphur-coloured; also the late dwarf purple and Siberian, for it is not possible to have too great a variety of this excellent vegetable. If any plants were raised in the former months for autumn use and beginning of winter, let some of them be now pricked out into nursery beds to get strength for planting out finally in June.

Carrots.—In order to have tolerable sized roots in some reasonable time, the sowing of the seed should not be deferred beyond the middle of the month. When a supply of young carrots is required, two different sowings should be made this month; the latest sown is often found much less liable to be eaten by the worm than the earlier sown. If any have been sown for an early crop, thin them to three or four inches apart; if for a main crop, they should be thinned to six inches apart.

Cauliflowers.—The early cauliflower plants under hand-glasses should have earth drawn up to their stem. This will be of great service in promoting a strong forward growth. The hand and bell-glasses may still be continued on nights, and cold, wet weather; but in warm days, and when there are warm rains, let them be exposed to the free air; but when the plants are considerably advanced in growth, the glasses should be raised proportionately high on props, first drawing a border of earth, two or three inches high or more, round each plant; then place the props upon that, and set the glasses on the props; but towards the end of the month, or beginning of next, the glasses should be taken entirely away. Young cauliflower plants raised from seed sown last month should now be pricked into nursery beds, or into a hotbed, to forward them for final transplanting. Those which were raised from seed early this spring should be planted out for good; some of the strongest about the latter end of the month, and the rest in May and June.

Celery.—Tho young celery plants sown in February or March will be fit to prick out; plant some towards the middle or latter end of the month into a nursery bed, of rich, light earth, or in a hot-bed, to bring them forward. As these early sown plants, after they become fit for use, will not continue long before they run to seed, there should not be any large quantity raised or planted out. Sow some seed about the middle of the month to raise plants for a general crop, and to succeed those which were sown in March.

Leeks.—Leeks may still be sown for a full crop, and if sown about the middle of the month will succeed very well. Water immediately if the weather be dry, and repeatedly. The best sorts are tho large Scotch or the London and broad-leaved.

Marigold.—Sow in the third week of this month in very light soil, and thin out to ten inches apart. This plant is esteemed by many as a culinary vegetable.

Nasturtium.—Sow any time this month, either in drills or patches, in almost any soil. They can be made useful as a screen, placing stakes for them to climb over.

Peas.—Sow peas to succeed those sown in March, where a constant supply is required. There should be some sown, at least, every fortnight or three weeks. The marrowfat, and Knight's marrowfat, both very fine eating peas, and great bearers, are very proper kinds to sow at this season; likewise, the rouncival for a late crop; but any kind of large peas may be sown during this month. The hotspurs, dwarfs, and most of the smaller kinds, will succeed, if sown any time this month. Draw earth to rows which are come up, and advanced a little height. This will strengthen the plants, and forward them greatly. The earthing should always be performed, for the first time, when the plants are about three or four inches high. Set sticks. This should be done when the plants are about five or six inches high, observing to have the sticks of a proper height, that is, for the marrowfat, and other large peas, six or seven feet high; but those of four or five feet will do for those of the hotspurs, and other small sorts, placing one row of sticks to each row of peas.

POTATOES.—The middle of April is a very proper season for planting general crops of potatoes. In light dry soils, early planting is best, and in wet, strong lands, late planting is to be preferred. In light soils, the ground being deeply dug, the sets may be planted by dibbling, but in those that are of an opposite nature, planting with the spade is much better. Throughout the whole culture of this valuable root, there is not any greater improvement can be recommended in addition to a real good practice, than that of allowing the plants plenty of room, both between the rows, and also in the lines, in order that the whole of the branches, leaves, &c., may be fully developed; for if this be not the case, a great falling off will ensue in the quantity and quality of the produce; hence it follows that potatoes should be planted much thinner than is usually done. From thirty to thirty-six inches between the rows, and twelve inches from plant to plant, will yield a greater weight of potatoes of a given extent, than if they were planted much closer together. Many also err in planting too shallow. Six inches are a very proper depth. In regard to the culture of the potato, the editor of the *Farmer's Magazine* gives the following advice:—"If any blotching of the leaf appear, sprinkle salt between the rows. Try two experiments, one by dredging the under surface of the leaves with dusty lime, flour of sulphur, and soot, which mixture developes ammonia, and, at the same time, checks mildew; another by cutting back the haulm to within a leaf or two of the soil." The editor very judiciously qualifies this advice by saying, "It is not probable that the disease will appear as early as April, but since we know nothing of the actuating cause, and writers look to aphis or mildew, and stoutly defend each his own theory, it will be right to try various remedies," to which it may be answered that, until the actuating cause be discovered, the application of any specific remedy must be positively speculative.

RADISHES may still be sown for a successional crop. Water must be plentifully given if the weather be dry.

SALSAFY, SKIRRET, OR SCORZONERA may be sown about the middle of this month for the principal crop. Those which are sown earlier are apt to run up for seed before the roots acquire their due size, and are thereby rendered useless. Sow them separately, in open situations, and rake them in; or sow in drills, six or eight inches asunder. They will require thinning in May or June, to fiv or six inches distant, and the roots will attai perfection in autumn, and continue good til the spring following. They are by man much esteemed, both to boil and eat lik young carrots, and in soups, &c., and likewise for their top shoots in spring.

SPINACH.—Hoe the spinach which wa sown in the former month, especially th broad-cast sowings, and hoe the plants out t three, four, or five inches distance.

TURNIP SEED.—To succeed those cut las month, seed may be sown about the middl of this, either in drills an inch deep, an twelve or fifteen inches asunder, or broadcast thinly. Sow of the early Dutch sort and choose a rich, light, open spot of ground or sow amongst new-planted artichokes asparagus, sea-kale, or the like. Refresh generally with water, if the weather be dry both this and the former sowing.

THIRD WEEK.

ASPARAGUS.—If the state of the weather or any other circumstance, may hav hitherto prevented the asparagus bein dressed, and new plantations formed, le that now be done.

BEET.—Beet for a full crop should now b sown; the ground should be sub-trenche and well broken, which will prevent th roots from forking. Sow in drills, twelv inches apart, and moderately thin; if th seeds be good, cover lightly, and if th ground be dry, tread the whole slightly The *true blood red* is the sort most esteeme for its roots. White beet is cultivated as substitute for spinach, *the great white or swee beet* for the midribs and stalks, which ar separated from the lamina of the leaf, an are stewed and eaten like asparagus, unde the name of chard; this sort is more esteemed and cultivated on the continent tha in this country. In dry seasons, beet i liable to be destroyed by the turnip fly; i is, therefore, desirable to sow a small bed o two in different parts of the garden. If th general crop fail, then it may be made good by transplanting those from the seed beds although beet, like most similar roots, succeeds better when not transplanted.

BROCOLI.—Seeds of the most approve varieties should now be sown. Make choice of a warm airy border, on which to sow each sort separately. In regard to the cultivation of brocoli, the following may be considered as an excellent routine; and if followed, will afford both abundant and regular supplies:—

Purple and Green Cape, if sown in ay or June, will produce a regular supply om August to December. The same sorts, wn in July and August, will, if the winter mild, afford a supply during April and ay.

Grainge's Early White or Cauli- ower Brocoli, which is the same va- ety, if sown at three different periods' tween the first of May and the last of ine, will produce a regular supply from ichaelmas to Christmas.

The Early Purple, if sown in April, ill produce from November to February; sowing of the same sort made in June will oduce excellent sprouts during March and pril.

Dwarf Brown, Close-headed, sown out the middle of April, will arrive at rfection during the following March and pril, and the tall, long-headed purple, if wn about the latter end of March, will be perfection at the same time with the st.

Green Close-headed Winter will, in dinary mild winters, afford a succession om November till March, from seeds sown May.

Early White.—This is the next in earli- ss to the Cape varieties; seeds sown in Feb- ary, on a slight hot-bed, will produce plants at will be in perfection from the first of ovember till January. An abundant ipply, to be got for use in autumn, is sirable, as the heads may be cut on the pearance of frost, and preserved during reat part of winter, in a similar manner to uliflowers.

The Sulphur-coloured Spring White, nd late Dwarf Close-headed Purple, e excellent sorts, and will produce heads uring April and May, from seeds sown the receding March and April. The Siberian anish, or latest green, is the most hardy of e whole tribe it grows close to the round, and occupies only a small space. eeds sown in April will produce heads uring May the following year. The Ports- outh cream-coloured is the largest breeding ort, and will be in great perfection from ebruary till April, from seeds sown in pril the preceding year.

Cabbages.—The plants should now be lanted out twelve inches from each other, nd in rows eighteen inches apart. In small ardens, cabbages are seldom raised from eed, but the plants are purchased, when eady for planting out; this is, however, a ad practice. There are few gardens, how- ver small, that cannot afford a small patch f ground, in which to sow the seeds, when the genuineness of the plants can be depended upon. The plants that are bought in bundles in the London markets are a mixture of every kind and sort—some late, some early, and some not worth cultivating at all. All cabbages require a soil enriched with animal manure, and frequent hoeing up, to admit air to their roots; and on this account they should always be planted in rows.

Carrots.—The early-sown carrots will now be showing above ground; but, as the young plants are liable to be destroyed by insects, it is advisable, in all cases, to sow thick. It may be here observed, that should the crops of this vegetable, sown at this time, or at a more early period of the season, fail, the deficiency may be made good by sowing still later; for even the middle of May is not too late, by which time the grubs will probably have attained their fly state before the plants came up. The goodness of the carrot depending entirely on the ease with which the roots can penetrate the soil, it is obvious that the soil in which these roots are grown must not be of a very adhesive nature; and thus the best carrots are grown in red sand, or in sandy peat. If manure in a fresh state be laid on a carrot-bed, or if the soil be not thoroughly pulverised, the roots will become forked, fibrous, and worm-eaten.

Cauliflowers. — Remove cauliflower plants that have been in frames, or on warm borders, during the winter, if not done in the former month. If cauliflower plants have been raised from seed sown last month, they should now be removed into a bed of rich earth, in a warm situation; but, where, a moderate hotbed can be obtained, it will be most advisable to prick them into it, which will forward them greatly. By placing out the plants on a moderate hotbed, it will bring them forward to be fit for transplanting the middle of May into the place where they are to come to maturity. They will produce their heads in July. Cauliflower seed may be sown this month in the open borders; the plants from which sowing will come into use in August and September.

Celery.—Celery seed for a successional crop may still be sown. The plants from seeds sown in February and the beginning of March will now be fit for transplanting into a nursery bed, which for this purpose cannot be well too rich. Allow them plenty of room to grow, for if drawn up weakly in consequence of being too thickly planted, they will seldom attain that size and perfection which they would do if attended to in this respect. Water the plants that are pricked out, and if the weather be hot, it would be advisable to give them temporary shading.

CUCUMBERS.—Sow the seeds of cucumbers the latter end of this month, in order to raise plants to ridge out under hand or bell-glasses in May.

FENNEL.—Sow on a spot of light earth any time this month. It may also be propagated by slips of the root, and a few plants will be sufficient.

KIDNEY BEANS.—Towards the close of the month kidney beans may still be sown in a more exposed or open spot of ground. For the earliest sowing, we would recommend the negro, Battersea, or the liver-coloured; they must be sown in drills two feet apart, and two inches deep. They should also be sown in dry weather, as wet is apt to destroy the seeds in the ground. French beans are much improved in earliness as well as productiveness by being transplanted. The early crops may, therefore, be sown in flat boxes, pans, or pots, and when about three inches high transplanted to where they are to stand.

LEEKS.—If a full crop of leeks were not sown last month, let that be done without delay.

LETTUCE.—Lettuce seed should be sown every three weeks, and one or two plantings should be made from every sowing. The soil in which they are planted should be rich and sandy, and not in a cold situation: a foot apart is the proper distance for the plants.

MARJORAM.—Sow on a bed of light earth any time this month, and when fit, transplant into rows nine or ten inches apart, and three or four in a line. If the knotted or sweet marjoram be wanted earlier, some seeds may be sown and covered with a hand or bell-glass to bring the seeds forward. Pot marjoram may be raised by slips of the root.

ONIONS.—The hoe must now be applied to those that are above ground. It is not yet too late to sow with success. The seed, when sown, should be either trampled or rolled. This is the most proper season for sowing for pickling. The sort is not very material, only the earlier the seed is sown the better. It is not judicious to thin the crops intended for pickling. Particular care should be taken, in hoeing onions, not to earth up the bulbs, as it is said to prevent them from swelling.

PEAS.—Peas may now be sown for late crops. A pint of peas will sow twenty yards of drill, each drill being one inch and a half deep, and the drills two or three feet asunder. The marrows, the blue Prussian, and the Auvergne, are the best adapted for this season. There are great enemies to new-sown peas; and to prevent their depredations, it would be advisable to strew dried turf over the peas as soon as they are put into the ground, and before they are covered with earth. And this plan answers a double purpose; for it not only protects the peas from their enemies, but it keeps enough air about them to allow them to vegetate. Take off the tops of all the roots, when the plants are one foot high, and again when they are three feet high. Pay particular attention to the sticking of the peas, and adapt the sticks to the growth of the plants, allowing them about a foot higher than the average height of the peas. The sticks should never cross each other at the top.

SAVOY.—The principal crop may be sown, about the latter end of this month; plant out some of the early sown. If there be a scarcity of ground, they may be planted between beans, or even early cauliflowers; but an open rich spot is preferable.—*(See Brocoli).*

SMALL SALAD.—Sow small salad about once every week or fortnight; the sorts are, cresses, mustard, rape, and radish.

SPINACH.—Sow spinach for a successional crop, in May or June; when a constant supply of this plant is required, you should sow once a fortnight, as the spring sowings soon run up to seed. Hoe the spinach that was sown in the former month, especially the broad-cast sowings; and thin the plants out to three, four, or five inches distance.

TURNIPS.—Turnip-seed, to succeed those sown last month, should be sown the latter end of this in drills, an inch deep, and eighteen inches apart.

FOURTH WEEK.

ANGELICA.—Plant out the angelica plants sown in autumn; they should be planted by the sides of ditches or ponds, or in cold or damp ground, at four feet apart between the lines. It is also sometimes cultivated by placing the young plants in shallow trenches, earthing up the stems as they advance, like celery, taking care, that when the stalks are cut for use, the earth be levelled down again to the crown of the plant. If this be neglected, the roots are liable to perish in the ground.

BORECOLE.—Sow curled borecole, sometimes called brown cole and green cole; for these are two powerful sorts, one green, and the other of a dark red or brown colour. These are a sort of loose cabbage or open colewort kind, and are excellent for spring and winter use.

Beans.—Plant more beans in order to have a regular supply. The long podded beans are a proper kind to plant at this time; this bean is a great bearer, and very profitable for the use of a family. They may be planted any time this month, allowing the distance of two feet and a half, or a yard, between the rows. The Windsor bean, Toker, and the Sandwich, or any of the large kinds, may yet be planted; let them also be planted in rows, a yard at least asunder. But if in planting any large kind of beans, you draw the distance of two feet and a half between the rows, a row of Savoys might be planted between them; and if four feet asunder, two rows of Savoys or spring-sown cabbages may be planted to come in for autumn and winter service. Draw earth to the stems of those beans which are come up; this should be done when the plants are from about three to four or five inches high; it will greatly strengthen and forward their growth.

Cabbage and Savoys.—Draw some earth about the stems of forward cabbage plants; it will strengthen them and greatly encourage their growth. Sow cabbage and savoy seeds for a succession of young summer cabbages, and a general supply for autumnal use and a full winter crop. Let them be sown early, each sort separately, in an open situation. Some of the cabbage and savoy plants which were sown in February and March should be thinned out and pricked into nursery beds, to get strength before they are planted out for good.

Capsicums should not be sown later than the middle of the month, at the bottom of a south wall or hedge, and in order to bring them forward, may be covered with the hand or bell glass. A spot eighteen inches or two feet square, sown moderately thick, will give plants enough for a large family. Sow in rich, light earth, and cover a quarter of an inch in depth; they will be fit to transplant in June. Water frequently, and when they have come up, give them fresh air every day, shutting carefully down at night for fear of frost, as very little frost would prove fatal to them.

Camomile.—Camomile is cultivated in family gardens for its flowers, which are used medicinally in decoctions and fomentations. It flowers from the end of June till the beginning of August there are two sorts, the common single-flowered, which is the species, and the double-flowered, which is the variety. A small bed is sufficient for the supply of a family.

Early Cucumber and Melon Beds.—Let the cucumber and melon beds, which were made a month or two ago, be now carefully examined, and see if they be of a proper degree of heat. This should be particularly attended to at this season, for these plants will not yield fine fruit, nor a plentiful crop, if they be destitute of a proper heat. In hot days, when the sun is fierce, it will be proper to shade them for two or three hours, during the greatest heat, with a thin mat, or a little loose hay strewn thinly over the glasses.

Jerusalem Artichokes may be planted any time this month. Plant sets of the roots, which are the eatable part of this vegetable, as in planting potatoes, in rows a yard asunder, and nine or ten inches in a row. A small quantity will serve an ordinary family, being very productive. This vegetable before the introduction of the potato was held in great esteem, being an excellent root.

Lettuce.—Continue to sow and plant occasional crops of lettuce of all sorts; plant and sow also in rich open ground.

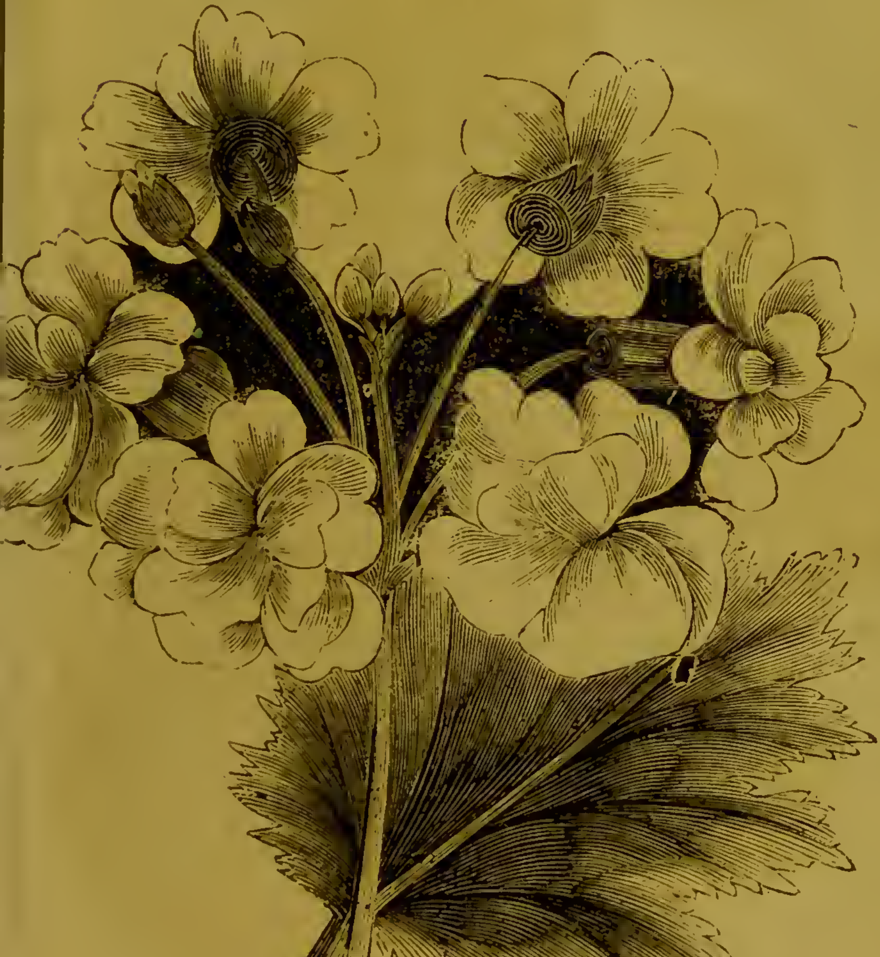
Mint.—Slips of mint may still be planted either closely in a bed, or in lines six or eight inches asunder. Mint will grow almost everywhere, but thrives best in a moistish light earth. A small bed, or a few rows, are sufficient for an ordinary family. If wanted early, a little may be covered with a hand-glass, which will bring it forward.

Potatoes may still be planted. The potato thrives best on a light loamy soil, neither too dry nor too moist. The most agreeably flavoured table potatoes are almost always produced from newly-broken-up pasture ground, not manured, or from any new soil. When the soil is suitable, they delight in much rain, and hence the large crops of potatoes obtained in Ireland, Lancashire, and the west of Scotland. The potato is subject to a disease called the curl, which often proves fatal to its growth. It is an endemic, rather than a constitutional malady; but it is said to be prevented by taking up those intended for seed a month before they are ripe, or get mealy, and exposing them on the surface of dry ground, till they become green, before they are placed in the store-pit.

Purslane.—This plant being of a moist, cold nature, is by many people much esteemed to use in summer salads. Where only small quantities of this herb are occasionally wanted, a little seed may be sown on the vacant spaces in cucumber and melon frames.

(*Continued on page* 114.)

THE CUCUMBER.—*See Page* 119.



DOUBLE WHITE CHINESE PRIMROSE.—*See Page* 115.

THE KITCHEN GARDEN.

CONTINUED.

Onions.—Where circumstances have prevented the principal crops being sown, let it now be done. Onions should be always sown in drills, twelve inches apart, by which the operations of hoeing and cleaning the ground between the drills will be facilitated. This is a very proper time to sow full crops of this vegetable, in strong damp soils.

Radishes.—Thin the general crops, where they have risen too thick, leaving the plants about two or three inches asunder. Clear them well from weeds.

Small Salading.—Sow small salading about once every week or fortnight. The sorts are cresses, mustard, rape, and radish.

Sea-Kale.—The sprouts which rise at this time, being properly blanched, are held in high estimation. The process of blanching is performed in a variety of ways. The best and most convenient for sea-kale that is not forced, is to cover the beds in autumn with leaves raked up from the woods or pleasure-ground, strewing each bed in thickness according to the strength and age of the plants, giving the greatest thickness to the oldest or strongest roots. The layer may be from five inches to fifteen when first laid on, and over that place a slight protection of light, littery dung, to prevent the leaves from being blown about. This covering is to remain on until the crop be all cut, when it may be taken away, and the beds dug over ; or when, from particular circumstances, this has not been attended to in autumn, as at this time the buds begin to appear, fork the beds regularly over, and cover the plants from twelve to fifteen or eighteen inches with saw-dust or rotten tan, when it can be conveniently procured. If neither can be had, break the mould on the surface of the beds as fine as possible, and mould up the plants with it. But when there are blanching-pots used for the crops of sea-kale which have been forcing during the winter, they may be used with propriety to blanch the spring crops, as they will now be useless in the forcing department. Place them over the plants, and draw a sufficient quantity of mould round their base to prevent the admission of air. The action of the rays of the sun penetrating through the pots will, in a considerable manner, accelerate their growth. Large flower-pots turned down upon them will answer the purpose, provided the holes in the bottom of the pot be stopped : the plants will draw sufficient air for their sustenance, however well the holes may be stopped. When the young stems are about three or four inches high, remove the leaves, where they have been used, carefully with a fork, and cut them off, but so as not to injure the remaining buds which are springing from the same root. A succession of gatherings may be continued for five or six weeks, after which period the plants should be uncovered and their leaves suffered to grow, in order that they may acquire and return a sufficient quantity of nutriment to the roots for the next year's buds. The flowers, when the seeds are not wanted, ought to be stripped off with the finger and thumb as long as they appear, as they tend considerably to weaken the plant.

LISIANTHUS RUSSELLIANUS.

This splendid flower is a native of Texas, in North America, on the confines of Mexico, and was found by Mr. Russell, whose name it bears, growing amongst some brushwood, where the influence of the sun could never reach it. In its natural habitat, the flowers are not very numerous, not averaging much more than twelve on each stem, but as we witnessed it in Mr. Cuthill's garden, where the drawing of the plant was taken, the flowers were so numerous as almost to defy calculation, one plant alone having above seven hundred blossoms, and was growing in a No. 8 sized pot. This must, in a great measure, be attributed to the peculiar mode of cultivation adopted by Mr. Cuthill, who has now had the plant under his care for eleven years, during which time, by assimilating the treatment of it with the habits of its native habitat, he has succeeded in bringing it to its present state of perfection. From the year 1840, twenty-four prizes have been awarded to Mr. Cuthill, by the different floricultural societies, and the specimen from which we took the drawing, obtained for him a certificate of merit, at a late exhibition of the Horticultural Society. In its general outline, the flower bears some resemblance to the petunia, being of a deep purple. The stigmas and anthers are of a bright yellow, forming a beautiful contrast with the colours of the petals. It is propagated by seed, but from its extreme minuteness, great care is required in the sowing of it, or the first watering, particularly if it be upon a loose soil, carries the seed along with it. The flowers are in their greatest splendour in the month of July, and the plant continues in bloom from two to three months, forming a most beautiful ornament for the drawing-room and conservatory.

DOUBLE WHITE CHINESE PRIMROSE.

Primula preniteus, or, *Primula sinensis*, *var. fl. alb. pleno.*

It is now about twenty-five years ago, that the respectable veteran of the French horticulturists, the Chevalier Soulange Bodin, of whom we were two years ago deprived by death, brought from England a plant which then fetched a high price, *the Chinese Primrose*, which our neighbours on the other side of the channel cultivated since 1820. This plant, the type of the species, was red and very handsome, but single. During fifteen years, we have incessantly sown the seed of this primrose, under the expectation of obtaining some new varieties more remarkable, but the Chinese plant in its stubborness laughed at us, like certain dealers in seeds of rare exotics, or blue camellias or rainbow roses, laugh at the present day, at the too confiding amateurs. Our primrose produced at one time a flower rather smaller, at another one rather larger than the type; at one time it was more indented, at another more rounded, sometimes of a paler, and at other times of a deeper colour, but at that epoch it was not then admissible to affix varieties at ten francs, on botanical characters of that kind. Nevertheless, one fine and lucky morning one of the French growers perceived a white flower, but very single; what mattered it, it was at least something gained. A short time afterwards an English horticulturist beheld springing forth from his seed a white and a red primrose, *quite double.* What a fortunate chance, without taking into consideration the profit. In 1839, the plant with white flowers was introduced in France; the plant with red flowers was not obtained until the following year, so tenacious were *our friends* on the other side of the channel, of the red double flowering primrose. Like everything which is new, the double flowering Chinese primrose became the rage, and it may be boldly affirmed that it was with these plants that the system of fraud and imposition began with the greatest effrontery, and abusing without the slightest shame the good faith and confidence of the amateurs. A certain individual was in possession of about ten plants of the double white primrose, very weak and dwindling. Every person was anxious to possess a plant, and it was carried to that extreme, that in less than six weeks, 1,200 plants were sent out of Paris. What an extraordinary phenomenon of forced vegetation! The truth must be told, all the plants were single, and even sometimes very red. People soon became disgusted, which generally happens, most particularly when they have been deceived, and the double primroses were forgotten, to run after some fresh novelty. We wish, however, to revive the taste of the amateurs for these pretty flowers, especially as they flourish when there are few other flowers in bloom.

The Chinese primroses are easily propagated by seed, by slips taken with great care from the neck of the root, and from cuttings. The varieties are by no means plentiful.

In pure heath mould, the primroses thrive very well the first year, but they retain their beauty but for a very short time. We in general mix with it about a quarter of common garden mould, and an eighth of well decomposed soil. A small quantity of charcoal dust produces an excellent effect on the soil, and which produces an extraordinary vegetation in the plants. These plants, flourish in a temperate greenhouse, or rather in a room, for we know of no plant that is a greater ornament to a drawing-room or a boudoir than the Chinese primrose. If proper care be taken of them, giving them water in small quantities, but frequently, so that the soil be always kept fresh and moist, and that they be not annoyed with dust or smoke, they will keep in flower the whole of the winter, and sometimes even in the summer. If in the autumn we cut down our primroses level with the ground, every plant will push forth a number of shoots, which should be carefully divided, and planted in a light rich soil and in twenty-four sized pots. If the surface of the mould be covered with sand, or rather with pulverized charcoal, the chance of the plants taking root is so much the greater. These pots must be plunged in a warm hotbed, and covered with a glass. All humidity should be avoided, which is an essential condition for these plants as well as for all others that are of a soft and spongy nature.

The greenhouses of Baron Rothschild are ornamented with such an extraordinary number of primroses, that the stranger on visiting these vast and handsome edifices where nothing is wanting, water, rocks, trees of the largest dimensions, may fancy himself in a French forest in the middle of the month of May.

LIGHTS.—The small lap is far more preferable than the broad one. The latter is an attraction to moisture, which, when expanded by frost, often breaks the squares.

ON THE MANAGEMENT OF PLANTS IN ROOMS.

WHERE a few plants only are kept, and these in the windows, little more need be said than that they should be placed as near to the light as possible; and, if on a double or treble row on a bench or table, that the smallest should be placed next to the glass, and the largest farthest back, so that they may all have as great a share of the sun and light as can be obtained. This is certainly the natural order in which to place these plants; but how often do we see that order reversed, merely because they are better exhibited to the view of the spectators in the room!

They should never be placed much below the level of the glass, but always so that the sun may shine on the earth in their pots as well as on the plants. Tall plants are often placed on the floor, whereby the sun is entirely excluded from the pots, and his influence from the roots of the plants, which is an error that operates much to their detriment.

Plants placed on small stages fitted to the windows should also be carefully arranged, as already noticed, placing the lowest next the light, that the whole may be as much exposed to it as possible. These stages should be placed on castors, in order that they may easily be moved from or towards the light at pleasure. If the window be towards the full sun, the stages should be drawn back in the middle of the day for two or three hours in very hot, clear weather; and at other times, when it may be necessary to shade some of the plants, for the sake of preserving them longer in flower.

But there is another reason for having these stages on castors, or pivots, which is, that of turning them round to view the flowers at pleasure and with ease; also, by having them placed in that manner, they could be moved from one room to another with facility, either to take advantage of sunshine in the short days of winter, accordingly as the room may be situated in regard to aspect, or from the morning parlour to the drawing-room, and the contrary. All this may be done without in the least disturbing the plants, and at an expense not worth mentioning.

Plants placed in the lobby or hall, not, perhaps, near to a window, but on tables or chairs, merely to furnish them out, and divest them of their dull appearances, should never be suffered to stand long in that manner at a time; but should be changed to a better situation occasionally, in order to recruit the health and recover the lost verdure of the plants. If we but half observe what nature points out, the plants themselves will tell what should be done. They will stretch their feeble shoots towards the light, as much as to say, "Let me see the face of the sun, the fountain of my life."

But not only plants placed in such situations as this, but all plants confined to the house, as to a prison, stretch forth their feeble shoots to the sun, as if calling out for its assistance. If, however, we be so clever as to restrain them thus far, we ought, on the other hand, to be so just as not to distort them out of measure, especially when such distortion can be so easily prevented; namely, by turning them round towards the light from time to time. By carefully observing this practice, the necessity of pruning may also be, in a great measure, prevented, and the trouble would be more than repaid, in the pleasure of beholding handsome and naturally shaped plants.

It may be here remarked, that by placing these plants in the open air in the summer months, their health is greatly renovated, and they naturally grow into shape again of their own accord; even if they were occasionally placed in a sheltered and partly-shaded situation for a few weeks at a time, they might be much benefited. It is necessary that the situation be partly shaded, that is, from the full sun; otherwise the plants would be scorched and be very much injured; as being removed from the house in a feeble and languid state, they could not well hold up against intense heat without doors but by degrees.

Gardeners, therefore, in the management of greenhouse plants, place them in the shade, as on the north side of a wall, or high fence, for two or three weeks after taking them out of the house in May or June, in order to inure them, by degrees, to bear the full sun and air, after which they generally place them in a free situation, or plunge them in the shrubbery or flower-plats, quite to the brim of the pots, in order that they may be kept the more moist by the earth; thus forming, in an instant, an exotic shrubbery.

Those who do not choose to empty their rooms altogether for the purpose of hardening and renovating the plants, might set them out by turns, and keep the rooms always furnished by substituting in their places a mixture of annual and other common plants.

The rules for watering plants can only be general, as much depends upon circumstances, and on the nature and variety of the plants. To a regular and minute observer, they will almost tell their wants themselves; and it is only necessary, as it were, to prevent those wants, in order to preserve and continue them in health and beauty. In hot weather, and when the plants are in a growing state, they should be looked over once, or even twice a day, not that every one should have water so often, but only those that need. In cooler seasons once in two or three days may be often enough, and in winter once a week or ten days may suffice. But plants in a state of total inactivity require no water further than to prevent the earth about them from becoming a *caput mortuum*, or absolute dust.

In cold, dull weather, it is safer to give too little rather than too much water; whereas, in hot, sultry weather, hardly enough can be given, especially to plants termed *great drinkers*, in a free-growing state.

Plants in light absorbent earth require more water than those of the same kind placed in stronger and more compact soils; and so, of course, the contrary. Few plants, however (except those which may be termed aquatic), can long endure stagnant water about their roots; even the greatest drinkers, that like to be often and thoroughly refreshed overhead, may be sickened in a short time by a saturation of water about their roots.

This fact leads us to condemn, in the strongest terms, the practice of placing pans or saucers under the plants, and feeding them by the roots only; that is, pouring the water continually into the pans, and never on the earth at top. The water should always be poured on the surface of the earth, in order that it may filter completely through it, to the benefit and refreshment of the fibres.

No objection can be made to the use of these pans, on account of the furniture; but the water should not be allowed to remain in them for a moment in winter, or when the plants are in a state of inactivity, otherwise the consequent destruction of the plants will follow.

In the hotter seasons of the year the plants should be often refreshed overhead, in order to clear the leaves from dust, which is of much importance in regard to their health.

This should also be occasionally done in winter, and the plants should either be carried to an outhouse, or the area, where the water that runs off could do no harm, or they could be placed one after the other into a large tub, and so have water poured from the rose of a watering-pot upon them, or they may have it thrown by a syringe, which is a better method. Plants kept in sitting-rooms, or others that are liable to be often covered over with dust, should be cleaned or dusted every morning, by a small bellows, besides being occasionally washed over the leaves.

Bulbous-rooted flowers in earth will require regular and moderate supplies of water, from the time they are taken into the house till they begin to shoot up their flower stems, and after that more freely till they are blown, when the quantity may again be lessened in order to prolong the season of their bloom. Those in water should have the water changed every four or five days, from the time their fibres begin to spring.

Rain water is to be preferred to any other; and next to it, river or running water; next, that of a pond or pool, exposed to the sun and air; but hard water ought never to be used, unless in case of absolute necessity.

CONSTRUCTION OF A MIXED FLOWER GARDEN.

The mixed flower garden is that which is generally aimed at by gardeners, and, consequently, it is that which is the most generally to be met with. In such a garden, plants, shrubs, and trees of all denominations are admitted too often in heterogeneous masses, without the least attention being paid to distribution, as far as regards their relative heights, their colours, time of flowering, or the effects they ultimately or immediately have in landscape. Many err in planting this sort of garden by introducing by far too many species, and those are often ill-selected. It is the object of the gardener to produce a brilliant and constant bloom of flowers, and that end cannot be attained but by a limited number of species, if properly arranged and selected. A moderate number of select sorts, of what may be properly called good border flowers, and that number selected equally from the different colours of such plants as are known to flower from February to October, is what ought to demand the exclusive attention of those who would plant a flower garden of this sort. Rarity and variety should not be condemned, and it is always better to have such confined to the botanical flower garden, or in a border either alphabetically or classically arranged; here they will be more immediately under the eye of the cultivator, and less liable to be destroyed or lost. Indeed, in every garden, where there is anything like a collection of plants, some sort of arrangement should be adopted, both as a nursery and an index, to point out the exact species.

of which the collection consists, as well as what species are lost. It has been observed by an intelligent writer upon this subject that flower gardens have been on the decline for the last half century, and the cause assigned is, that the great influx of new plants during that period has induced gardeners to be more solicitous about rare and new plants than well-disposed colours and quantity.

Little attention, till lately, has been practically paid to the disposal of flowers, so as to produce the best possible effect. On this subject the authoress of "The Florist's Manual" presents some very just observations; for she observes that the fashionable novice, who has stored her borders from the catalogue of some celebrated name with a variety of rare species; who has procured innumerable rose trees, chiefly consisting of old and common sorts, brought into notice by the new nomenclature; who has set apart a portion of her ground for American plants, and duly placed them in bog soil, with their names painted on large-headed pegs,—becomes disappointed, when, instead of the brilliant show of her humble neighbour's *parterre*, she finds her own distinguished only by a paucity of colour and fruitless expenditure. A variety of species, bog-plants, and large-lettered pegs, are all good in their way, but they will not produce a good flower garden; and the simple cause of the general failure, in this particular, is the solicitude which at present prevails for rarity and variety, in preference to well-blended quality; as without the frequent repetition of the same plant, it will be in vain to attempt a brilliant flower garden, as the art of procuring it consists in the judicious mixture of every common colour. Hence the foundation thus laid, the solicitude of those who wish to complete the superstructure must not be for rare species, but for new colour; so that the commonest *primula*, which presents a fresh shade of red, yellow, blue, &c., ought to be esteemed more valuable than the most rare American plant which does not bring a single advantage in the formation of that assemblage of flowers which may be distinguished by the term of the mingled flower garden. It is essential that the separate parts should, in their appearance, constitute a whole; and this appearance is compatible with any form into which the garden may be thrown, if attention be given to the manner of planting. In some gardens this appearance of a whole is entirely destroyed by the injudicious taste of setting apart distinct borders for pinks, *hepaticas*, *primulas*, or any other favourite kind of flowers, also for different species of bulbs, as *anemones*, *ranunculuses*, *hyacinths*, &c. These distinct borders, though beautiful in themselves, break that whole which should always be presented to the eye by the mingled flower garden, as single beds containing one species only form a blank, before that species produces its flowers, and a mass of decaying leaves, when the glow of their petals is no more. The reverse of this mode of planting is essential to the perfection of the mingled flower garden, in each border of which there should be at least two of every species; but the precise number must be regulated by the force of colour displayed by the plant, and the size and relative position of the borders.

The disposal of the margin or surrounding plantations also require much judgment and taste, so that the whole may harmonize with the arrangements within, and whilst they afford sufficient shelter, they should not be crowded, nor yet have a hedge-like appearance. The plantation, if not naturally existing, must be planted, and probably, if partly surrounded naturally, will require some artificial assistance, either to render the shelter sufficient, or to improve its appearance; in such cases, the most ornamental trees and shrubs should be placed in front, and in the most conspicuous places; and if the extent of the flower garden be great, some of the most curious and interesting may be introduced upon the grass, or in the larger of the clumps or groups, and if properly placed will have a good effect in the colouring even of the foliage, and particularly the habit of the trees. In order to produce a pleasing effect in planting, the trees should be grouped with judgment, and with a painter's practised eye.

The most fashionable style of flower gardens in present use is the mixed flower garden, in which the plants are arranged in groups and masses, care being taken that the colour and forms be arranged according to principles of good taste.

PIGEON'S DUNG.—Those that would make the most of a pigeon-house should spread over the floor every ten days, three or four bushels of ashes, which will help to keep the pigeon-dung from caking together, and make it spread even, and go further. Hen or fowl's-dung of all sorts should be mixed with ashes for the above reason.

THE CUCUMBER.

The engraving which we give in our present number, was taken from a plant cultivated by that eminent grower of this particular vegetable, Mr. Cuthill, of Camberwell; but as we shall refer occasionally to its culture, we will content ourselves, at present, by giving an outline of its history, and an exposition of those criteria by which the merits of the respective varieties are to be distinguished.

The earliest pages of history mention the cucumber as an esculent that was highly esteemed and coveted by the primitive races of mankind; and, as early as 1490 years before Christ, we find the Israelites remembering with regret the cucumbers which they had enjoyed in such abundance in Egypt (Numbers xi., 5). It is mentioned in another part of Scripture (Isaiah i., 8), where the prophet foretels the deserted state of Zion, by comparing her to a lodge in a garden of cucumbers.

A great degree of uncertainty exists as to the introduction of the cucumber into Europe; but it is generally supposed that it was effected by the Romans, who may be said to have been the instruments of introducing the majority of fruits and vegetables not only into Europe, but particularly into this country. It may be naturally supposed that the intercourse of the Romans with Africa rendered them acquainted with the cucumber, and that, from its grateful and cooling qualities, it became a favourite object of their cultivation; at all events, it is certain that, at the commencement of the first century of the Christian era, they had made great progress in naturalising it to their climate. They were grown in large boxes filled with dung, over which was spread the requisite quantity of mould, and they were sheltered from the casual inclemency of the weather by thin plates of talc, or lapis speculavis, which admitted the light nearly as well as our modern glass. At night, the boxes or baskets were removed to the sheltor of some convenient house, where the cold could not penetrate.—(Columella, lib. xi. c. 3.)

The Russians have a tradition that the cucumber was introduced into their country one thousand years before Christ, by a pilgrim wandering from Persia, who brought with him a number of seeds, pretending they were left to him by an angel from Heaven, and that he had only to plant one of the seeds in the ground to keep him from starvation. The Russians, to this day, are greedily fond of the cucumber, not a single Russian garden being without its ridges of cucumbers. Of its proper mode of culture, they, however, know but little. Nature, with them, is the best gardener, rejecting all assistance from art, although, in the gardens of the nobles the cucumber frame has been introduced as the greatest improvement in horticultural science.

The culture of the cucumber, as detailed by the Roman writer, *De Re Rustica*, also coincides very much with our practice in the open ground, and many of the modes of cultivation practised by our gardeners are evidently the result of Roman practice. It was called cucumis by the Romans, on account of the crookedness of the fruit; and it was directed by Palladius that the seed should be soaked in water before sowing, and the fruit to be grown in tubes, in order to increase its length. It is grown by us in wooden cradles, not so much to increase the length of the fruit as to prevent the crookedness of its growth. Similar directions are given by Columella and Quintilius (A.D. 151), the former of whom states, amongst other particulars, that the fruit of the cucumber will increase in length towards water in a vase sunk in the earth a few inches from its extremity. The experiment was frequently tried by the late Sir Joseph Banks; but the result did not answer his expectations, and he relinquished the practice.

Leaving the question at issue, whether the cucumber was actually introduced by the Romans into this country, although history is greatly in favour of such introduction, yet it is singular that we have not any record of its being grown in this country until the reign of Edward III. Gardeners at that time were very tenacious in recording any discovery that they might have made in the improved culture of any particular vegetable, confining the knowledge entirely to themselves, as a source of profit and emolument. Thus Thomas Hill mentions cucumbers as one of the products of the kitchen-garden, but abstains from giving instructions relative to its cultivation. It is, however, curious to observe the many absurdities and errors into which the cultivators of the cucumber fell in those days of horticultural science, for in the *Gardener's Labyrinth*, published by Dethicke, in 1577, under the fictitious name of *Didimus Mountain*, we find the following directions for the culture of the cucumber. He says, they are best trained upon a trellis, and *that the fruits corrupt not by lying on the earth.* His method of keeping the plants well supplied with water was by having worsted with one end in water and the other in the soil; but one of its greatest errors is that plants raised from cuttings are the most productive fruits.

Gerarde, In 1579, gives some very ample instructions for the cultivation of the cucumber, and mentions two varieties, that is, our common cucumber, and the *cucumis Hispanico*, or Spanish cucumber. The following will be read with a smile, as descriptive of the virtues of the cucumber, as laid down by the worthy Gerarde, who says, "that the cucumber, if eaten as a pottage made of it with mutton and oatmeal for breakfast, dinner, and supper, for three week without intermission, doth perfectly cure all manner of sauce phlegm and copper faces, red and shining, fiery noses (as red as red roses) with pimples, pumples, rubies, and suchlike previous faces."

Parkinson, in his *Paradisus*, in 1627, enumerates six varieties of the cucumber, although the ignorance of the gardeners as to forcing was great in the extreme. Some, he says, use great hollow glasses, like bell heads, to defend the plants from cold or heat of the sun.

The cucumber frame appears to have been first brought into vogue in 1727, and Switzer boasts that cucumbers, which twenty-five years before were never seen at table until the close of May, were then always ready early in March. Mr. Fowler, gardener to Sir Nathaniel Gould, at Stoke Newington, was the most successful cultivator of the cucumber, and was the first to raise plants in autumn, for fruiting about Christmas. He presented the king, George I., with a brace of full-grown cucumbers, on the New Year's-day of 1721.

The directions which Switzer gives for the culture of the cucumber in hotbeds are, with few exceptions, as full and satisfactory as those given by the most valid and reputable authorities a century afterwards.

In regard to the general merits of the cucumber, it is difficult to reconcile the qualities required by the professed judges of the vegetable with any of the principles of taste or beauty. One of these qualities is, that the cucumber should be ribbed; but why a ribbed cucumber is to be preferred to one with an even surface, seems difficult to divine. It is equally incomprehensible why a black-spined cucumber should be declared to be superior to one with white spine.

In regard to the size of the cucumbers, which are now grown to a prodigious length, Dr. Lindley very justly observes, "everybody wants to have his fruit longer than his neighbours, and if it be so long that no dish can be found to hold it, so much the better. But is there any common-sense in this? Of what use are these long fruits except to make people stare? Are they better flavoured, better bearers, better seeders? Quite the contrary; they are simply longer, indeed, too long to be placed on a dinner table, too long to be eaten by a small party, too coarse to suit a cultivated palate, and are, in fact, fit for nothing but to excite the admiration of the servants' hall."

Direction of Roots.—M. Durand has made to the Academy of Sciences another communication relative to his experiments, with the view of confirming his discovery of the cause of the roots of plants striking downwards. These leave no doubt that the roots shun the action of light, and that this is the cause of their pressing their way into the earth.

Planting.—Many vegetables require to be removed, whilst young, from the beds in which they were grown as seeds, and planted out in rows. A straight line is made with the line, which is gently treaded on each side. Commence now at one end of the trodden line, and, in the central, or untrodden part, pierce the earth with a dibble. Into the hole so made, insert the root of the plant, and pierce the earth at its side, so as to press the mould round the root, leaving no vacant space below.

Fecundation of the Dahlia.—The seeds of dahlias ripen in September and October, and should be selected from such flowers as have the greatest merits, and especially such as have been artificially fecundated, which operation is performed by covering the flower intended to be operated upon, for two or three days previously to their expanding, with a fine gauze net, so as to prevent accidental fecundation from taking place. With a camel-hair pencil, the pollen of the flower, of the colour, form, &c., wished to be added to the female parent, is taken from the male parent, and every *floret* of the female touched with it. This operation requires to be performed two or three successive days, according to the weather and the state of the flower. Few cultivators, however, take this trouble, thinking it unnecessary, as one flower produces seed from which flowers are produced of every colour, shade, and character peculiar to these species. It appears to be of some importance to select seeds from plants grown in very rich soil, and it is not improbable that the chemical properties of the soil have much to do, particularly with the colours.

CUTHILL'S LISIANTHUS RUSSELLIANUS. – *See Page* 114.

FORMATION OF GARDEN WALKS.

If the garden be small, one good walk all round is sufficient; and, if long and narrow, there should not be many cross ones. In the formation of the walks, the ground, if good, should be excavated to the depth of two or three feet, and disposed upon the compartment, in order to admit of a sufficient depth for a layer of stones, brickbats, rubbish, or rough gravel, &c., so as to render the whole perfectly dry at all seasons, as well as to prevent the rising up of worms. Under the walks, good drains should be formed, in order to carry off all superfluous water. The bottom being thus prepared, and the lower stratum laid as hollow as possible, the whole should be finished with the best gravel that can be procured, from six to twelve inches in depth—that of a binding nature is the best. The colour should be of a yellowish hue, as dark-coloured gravel, although it may be equally good for rendering a walk dry, firm, and hard, has not so cheerful an appearance. Lighter coloured gravels are also sooner tarnished, and, unless exceedingly well kept, soon look ill. The advantages of good gravel for the embellishment of a garden, is of much importance; but there are many situations where it is only to be procured at an enormous expense. Recourse must, therefore, be had to substitutes, several of which make excellent walks, equally comfortable and agreeable as gravel, but inferior to it in beauty.

Of these substitutes, coal-ashes are the best, particularly for kitchen-garden walks. Where utility and comfort are the only objects, ashes sifted, and laid upon any bottom, whether prepared or not, by being rendered dry, make excellent walks. They are not much affected by rain, seldom disturbed by frosts, and little subject to be overgrown with weeds. Should, however, the latter be the case, they are easily cleared.

Road-sand is also a good substitute for gravel, and that which is procured from roads formed of flints is the best. The walks may be rendered dry, before it is spread, in the same manner as gravel, which will prevent the effects of worm-casts, to which walks of sand are very subject. It should be laid on in a wet state, approaching to mortar and, when partially dry, rolled down. Walks of this sort are easily kept clear from weeds, and all through the summer are neat and clean. In autumn, and during the frosts and thaws of winter, they become soon unpleasant, and overgrown with various mosses and conferva.

Sea-gravel, in which small shells, and fragments of large ones abound, is sometimes used; and, if prepared in the following manner, will make a comfortable and handsome walk:—Mix equal quantities of brickdust and common cement together; add one part of this composition to ten of sea-gravel, and let the whole be well mixed together whilst dry. When laid on the walk, let it be thoroughly wetted, and immediately passed under a heavy roller, and it will make a walk approaching in appearance to shell marble.

Sawdust, where it can be had in abundance, makes a dry walk. It remains clear, as few weeds will make their appearance through it; but it requires to be often renewed.

In Holland, where gravel is very scarce, many of the best gardens have their walks formed of bog or sand. This is liable, however, to many inconveniences, and is neither clean nor dry.

Small pebbles, embedded in strong clay, when placed closely together, like a causeway, make a very clear and dry walk, and present a neat appearance; but this, if well done, becomes expensive, and cannot be carried to a great extent with a due regard to economy.

To these substitutes may be added shells, coals, pounded brickbats, stones, or slates, soap-boilers' waste, burned clay, when reduced to powder, &c.

Flag-stones have been strongly recommended of late by Mr. Loudon, as the best for kitchen-gardens. Mr. Loudon advises that they should be supported upon brick or stone piers, in order to admit the roots of trees and shrubs spreading under them. These walks, though expensive in their first formation, ultimately diminish the annual cost of weeding, repairing, &c.

Whether gravel or any of these conglomerate substitutes be used, it is necessary to have an edging of some sort; box is the neatest, and the least troublesome. Thrift is often used, and will last for a couple of years; but it requires to be planted frequently. Various other edgings—such as bricks placed on edge, slates or deal, are used; but they are all objectionable. Grass edgings are sometimes laid, but they require to be often mown, and have an unseemly appearance.

In gardens of small extent, edgings are sometimes formed of useful vegetables—such as parsley, strawberries, thyme, hyssop, winter savory, or camomile. These, whilst they remain young and ungathered, have an effect not out of character with the kitchen-garden. Some persons dispense with all sorts of edgings, and merely defend the walks with a beaten border, which they renew as occasion may require.

NATURAL HISTORY AND CULTURE OF THE VEGETABLE MARROW.

With the exception of the melon, cucumber, and vegetable marrow, few cucurbitaceons plants are cultivated in this country, or if so, chiefly for curiosity or ornament. There are, however, some others worthy of notice even here, whilst their importance in hot climates can hardly be over-estimated.

The vegetable marrow is supposed to be a variety of the *cucurbita melopaps*, the melon, pumpkin, or squash ; it attains a considerable size when ripe, measuring about a foot in length, and four or five inches through, being then rather strongly ribbed, although they are not so apparent when young. The fruit are generally used when nearly half-grown, although excellent in all stages, even when ripe, when it is superior to the pumpkin for pies. The flesh when boiled is very tender, mild, and buttery, and no doubt this will always be the sort preferred in English gardens. It was introduced from Persia in 1816.

The other varieties of this plant, called squashes in the United State, are very extensively grown there both for summer and winter use; they distinguish two classes of them—the bush and winter squashes, the former being grown for summer use, and the latter, as indicated, for winter stores. The varieties are very numerous of the first section, including the first *flat bush*, the *long bush*, and the *crook-necked bush*. These sorts are desirable for small gardens, as they do not run along the ground like the others, but form compact bushes, and are very prolific. Of the winter sorts, there are the *white winter*, the *bell-shaped winter*, the *crook necked winter*, and many others. Cobbett gives the preference to the flat bush for the summer, and the long white for the winter. In cooking they require no peeling, but are merely washed clean, and plain boiled for about twenty minutes, or until done. The winter sorts produce much larger fruit than the others ; these latter should be gathered as soon as they are large enough for use, in order not to weaken the plants, when some will produce nearly a bushel of squashes. The very small fruit are said to form a better pickle than cucumbers.

The large gourd is the *cucurbita potera*, the *poteron jeune* of the French, and is a very strong grower, throwing out shoots twenty or thirty feet long in a few weeks, and producing enormous fruit; it has been grown to the weight of two hundred and twelve pounds the single fruit in this country. When ripe, the flesh is two or three inches thick, of a yellow or salmon colour, enclosing the seeds, which are stuck round the sides of the central cavity. In a young state the fruit are very good, used as a vegetable marrow, or in soups, but it is too large a grower to be recommended. There are several varieties of it.

Apparently, a variety either of this or the preceding is the *coucourzella*, a vegetable marrow highly esteemed in France. It is a very rambling grower, and the fruit should be gathered as soon as it is out of flower, or it becomes too large for use ; it is then about six inches long, and nearly two through, very tender and delicious.

Varieties of the *Cucurbita potera* are the most commonly grown in Turkey, the markets of Constantinople being supplied with them for fully six months in the year. There are several varieties, and they are universally used in soups.

The pumpkin is the *Cucurbita pepo*, a native of the Levant, and was introduced to this country about 1570. It is hardly so much grown as formerly, although pumpkin pie may still be occasionally met with. On the continent it is used in soups, also boiled and fried. Being much coarser than the vegetable marrow, it is not likely to be much grown.

The *warted gourd*, or *squash* (*Cucurbita verrucosa*) is a native of the east, and appears to have been in cultivation since 1658. It is grown in North America, with those before mentioned, under the common name of squash, and perhaps some of the *bush* varieties belong to this species.

The *bottle gourd* (*Langenaria vulgaris*) is a native of the East Indies, and appears to have been introduced as early as 1597. This is by some thought to be the gourd of Jonah, from the rapidity of its growth when well supplied with moisture. There are several varieties, including the *club gourd*, the fruit of which sometimes attains a length of six or seven feet in the east. The bottle gourd is one of the most extensively cultivated in the neighbourhood of Constantinople, the young fruit being cut when about the size of useable cucumbers, the inside scooped out, filled up with rice and forced meat, and boiled. Cooked thus, it is in great repute with the Turks.

The plants are trained so as to form cool arbours, so grateful in a hot climate.

Many other sorts of gourds and allied plants are cultivated in various warm climates. The above are here enumerated, because they will all succeed during our summers, treated as tender annuals.

As the cultivation of one species is applicable to all, the following directions are applied generally:—As the weather is not usually warm enough for these plants out of doors until the middle or latter end of May, the seed should not be sown until the first or second week in April. It should be sown in pots filled with light rich soil, and placed in a cucumber frame. The plants should be carefully potted off as soon as the seed leaves expand, singly, in small pots, and replaced in a close heat until they begin to grow freely, when they should be topped, and gradually hardened off. About the last week in May plant them out singly where they are to remain, placing a hand-glass over each until they are well established, when the glass should be raised on bricks, and the shoots trained regularly out. They are generally allowed to grow as they like, into a confused mass of plenty of leaves, but few fruit. They are the better for some thinning and regulating, though little time can generally be spared for so necessary an operation. At any rate, once well established, they flourish until the frost kills them, or until they are exhausted by bearing. The places generally selected to turn these plants out in are most frequently the top of compost and rotten dung-heaps, or old spent hotbeds. The trenches between asparagus beds are also good situations for some of them. But it is questionable whether the selection of a much poorer soil would not be more productive of profitable results than the above way. If a barren piece of land were chosen, the plants would be much more manageable, and by a judicious application of water, either pure or with manure in solution, their luxuriance of growth would be checked, and the prodution of fruit would doubtless be much greater than under the old system.

If the first supply was insufficient or not likely to last through the season, a sowing out of doors may be made in July, especially of the *squashes*. Even sown as late as August, these latter will come into bearing, and keep on the supply until all are killed by frost. In America they are eaten as turnips, and are, by many, preferred to that root. If any of those plants are put out in the open quarters, they should have the same summer treatment as other crops; being kept free from weeds, the ground well stirred, and they should be well watered in dry weather. These plants are excellent for covering unsightly objects, or pailings, walls, or any odd corner, being easily trained, especially the smaller fruited sorts, in any required direction, and in the autumn their fruits make a fine display.

Besides the various uses already noticed, and many more which it would be tedious to mention, various kinds afford a valuable addition to sea stores, lasting long after all ordinary vegetables are used up, and forming a grateful addition to the scanty fare of a long voyage. Yet another use remains to be mentioned; the young leaves and tender tops form an excellent substitute for spinach, especially in the seasons when that vegetable is most liable to fail. No danger need be apprehended in picking the tops for this purpose, as such a process will make the plants more branching, and increase the quantity of fruit.

INSTRUCTIONS IN THE ART OF HYBRIDIZING.

In bringing before the notice of our readers the interesting art of hybridizing, we have to remind them that nothing should be done without a meaning as clear as the sun at noonday—nothing should be attempted without an object, that object being the improvement of one or other of the flowers on which we are at work. Now, the only points to be gained by hybridizing are, first, to obtain the properties or qualities of a tender plant upon a hardy one, or the flowers or colours of an ill-habited plant upon one of good habit. Generally speaking, these two points comprise all that can be gained; but there may be another object, which is only comprised in those mentioned by implication, the mixture of colour between plants of equal or nearly equal claims. The first of these objects is important, and has been accomplished to a great extent in the rhododendron. The difficulties attending this operation with many flowers are, first, its species flowering at different seasons; secondly, their flowering in different places—for there are certain rules to be observed, without which failure is certain. The pistil of the female plant—or, rather, the plant that is to bear the seed—has to be impregnated with the pollen or farina of the male plant, or the one which is required to impart the desired property; and this requires some nicety. First, the seed-bearing plant must be watched, and, as soon as the flowers open, the stamens which hold the powder and pollen must be taken out by small tweezers before they burst—indeed, as soon as they can be got hold of. This secures the pistil from being impregnated by the flower itself. The next is to observe from hour to hour, or from day to day, and as soon as the top of the pistil is glutinous, it is ready for the operation, and at that time the pollen must be applied: consequently, provision must be made for it by forcing or retarding the other plant, so that the pollen shall be ready at the time. One thing is most certain—if the pollen be not ready, there is not any hope; but if it be ready beforehand, it is possible to keep it. We have carried it a hundred miles, and kept it some days, yet it has answered; but how long it could be kept has not yet been proved. It has been said that it could be carried a long voyage, and even then be efficacious. In the case of a Rhododendron maximum, which being impregnated with a R. arboreum, the latter was in bloom three weeks before the former, yet every stage of the process proved, as well as the result did, that the operation had perfectly succeeded. The plan we adopted was to cut out the point or end of the pistil directly the flower opened; and, as the pollen vessels burst, we gathered the single flowers from the bunch, we placed the stalk in water in one of the holes of a pansy stand, covering it with a wine glass, which completely excluded the air, as we flooded the surface, that the edge might stand in water. This we did with each bloom as the pollen appeared, so that before any one plant was ready to receive impregnation, we had all the flowers of the Arborea off the bunch some days. The flowers had almost perished —the farina had fallen to the bottom of the cups; and we took it out with a camel's-hair pencil, and applied it to the pistils of the hardy plant, which had been accelerated all we could by protecting with glass. This merely proves that the pollen might be brought from great distances, if done with care, and some persons speculate in its keeping as well as seed. This may be tried: our business is to tell whatever we know, and not to speculate on what may be done. But as opportunities of procuring flowers offer frequently, they need not be lost; and our opinion is, that flowers picked in the usual way, and shut in a book, might be preserved some days in sufficient order to perform the operation.

The mode of performing the operation having been described in part, we have merely to add that some flowers are much more difficult to hybridize than others, and that, unless they are caught at the moment the pistil is glutinous, they will be crossed by some other flower or by themselves. The instances of hybridizing in various flowers will be recognised in many families, but in none more so than in the family we have mentioned; for in that the operation has been successfully performed by the bright yellow Azalea sinensis, which is deciduous, upon the rhododendron, which is evergreen; and here there is something worth trying for. The term has been generally applied to the crossing of species; but the cross-breeding of flowers for the improvement of their properties is carried on to a great extent, as is evident from the pansy, the rose, the mimulus, phlox, verbena, pink, carnation, tulip, auricula, fuchsia, and many other subjects, and those who well perform it, instead of leaving it to nature, may, generally speaking, calculate upon a result with more certainty. The first object with a plant is to sow seed from the best habit. With a flower we should select the best form and texture, and it is only when two flowers are distinguished for equal, though different, good qualities that we can recommend both to be crossed; for here the chances are that both will yield improvements; but where the form of a flow or the habit of a plant is bad, and the mere colour or size is the object to obtain seed, only the plant of good habit, or the flower of good form and texture. In hybridizing or breeding the pansy, seed from a round, thick, smooth flower. In tulips, seed from a pure yellow, or pure white ground, with a thick, smooth, flat-ended petal, that forms the most even-edged cup, and the rounder the better. In a rose, take the thick, well imbricated petal, that opens freely. In a verbena, take the roundest flower, the freest from notch or serrature, and the most stiff petal. In petunias, seek for the thick, round flower with the flattest tip. In auriculas, look for the flattest, roundest flower with the smoothest paste, the smallest tube, and the evenest-divided colours; for the widths of the white colour and edge ought to be alike. In the ranunculus, which has been produced all but, if not quite, perfect, look for the semi-double varieties that are nearest to double, with bright, broad, thick, smooth petals, and let the pollen you apply come from flowers which are desirable on account of colour, nor does it matter what flower it is; all that has to be done is to select that which is most desirable for form and texture, as the seed bearer, and that which is most conspicuous for colour and size. The fuchsia fulgens was the means of deteriorating the whole race of fuchsias, and the benefit of crossing was hardly felt for years. The coarseness of all the novelties was proverbial, not because pains were taken to hybridize, but because fulgens happened to be a free seeder, whilst the more elegant species were very shy seed bearers; and florists merely sowed the seeds from the former because it grew to their hands. Since this, people have been more careful, and the fuchsia is rapidly improving. It is curious that the very seed pods of flowers frequently change character; those in the habit of coming small often come large, and seeing these, we have a curious field for speculation, in the adaption of the principle of fruit. For instance, by impregnating fruit for the purpose of observing whether there be any distinct alteration in the form or flavour of the produce the same year, not that it would indicate exactly the kind of fruit that the seed therein would produce, but that it might make a difference in the fruit, as it often does in the seed pod. We know there is a difference produced in the seedling fruit that comes afterwards from the seed of the fruit impregnated; but of hybridizing in the case of fruit, we shall speak hereafter, as well as of some flowers, which present from their nature some obstacles to the operation.

ON CLIMBING PLANTS.

It is with regret we observe a total absence of climbing plants in the beds and borders of small flower gardens, while the amateur might cultivate them with so much advantage; but by climbing plants we must not be understood to include all those hardy plants, such as ivy, clematis, &c., which although, strictly speaking, are certainly climbers, yet not those alluded to, but even these, if we include the honeysuckle, the jessamine, the ampelopsis, and others of the same character, when in appropriate situations, may be made to contribute largely to the general appearance of a garden, by covering with verdure unsightly objects, or in assisting to form alcoves or verdant passages; and for these purposes, the ampelopsis (the Verginian creeper or woodbine) should never be omitted, its value arising from the very pleasing relief it affords to the general green of early autumn, its foliage then assuming a rich, sanguine hue, and these being permanent plants, are, of course, valuable in their places. It is, however, of half-hardy climbers that we intend now to speak. These should have a place in every garden of the smallest pretensions, nor is it in any way difficult to find suitable places for these pretty ramblers; they are beautiful either collectively, or as isolated objects. Rock-work and root-work, grottoes and fountains, should be annually covered with them, and when these are not found, a few stones and roots may be thrown together, and the climbers, if planted at the base, speedily cover them, forming a most agreeable object. Rustic vases and baskets are very proper places for them, and these articles appear in a much more artistical and appropriate light when filled with lowly creepers, or overhung with festoons of the natural flowers and foliage of climbers, than when occupied with stiff-looking geraniums or other plants of a similar growth; and even flower beds may be filled to great advantage with plants that are naturally climbers. By placing a few small bushes loosely on the surface of the bed, the plants will be enabled to cover the whole of it in a very short period, and as all of them are very abundant bloomers, and generally of a robust constitution, the display is not inferior nor less enduring than that of any other plant.

In planting them, in whatever situation they may be placed, a light rich soil of a good depth must be ensured. Sometimes when they are used to cover rock or root-work, they are stuck into a small fissure of the stones or holes in the roots, with scarcely a handful of soil, and there left, of course, to perish, and from it are perhaps given a bad name, and the culture of them discontinued; but such plants are never allowed a fair chance, not even for their lives, much less of developing their several beauties. We would recommend them always to be planted at the base of whatever they are wished to cover, with a free scope for the roots, selecting tall growing species for the top, and dwarfer ones for the bottom of the subject. If indeed the summit should be so high that they do not reach it in a season, it had better be covered with some permanent hardy climber, but in a tolerably good soil and situation. Many of the half-hardy sorts, such as cobea, &c., will attain a height of twenty or thirty feet with corresponding branches. Of these plants most suitable to the open air, we may mention, first, *Cobea scandens*, and *stipulans*; these, as before remarked, frequently run thirty feet in a season; they may be increased by cuttings, taken off when three inches long, and planted in a pot of leaf mould, and white sand, without displacing the leaves; cover them with a small glass, and plunge them in a gentle hot-bed; they do not, however, root very readily. The best manner of raising them is from seed. It should be sown early in March, on a gentle heat; and as soon as the plant has four leaves, they should be potted, and kept in a cold frame or greenhouse till the time for planting in the air, which is best done about the middle of May. The flowers are large; those of scandens are at first green, and afterwards change to a deep purple; stipularis is yellow.

MAURAUDIA BARCLAYANA AND SEMPERFLORENS.—These usually grow about ten feet high, and full of small flexuous branches, bearing a profusion of flowers; those of barclayana are purple outside, the inside is white; and those of semperflorens are rose coloured. They are very readily increased, either by cuttings or seed, if treated as recommended for Cobea; they are very beautiful, and equally adapted for all the purposes mentioned. They are also excellent window plants, bearing the confined air, and may be pruned and trained to any shape.

LOPHOSPERMUM ERUBESCENS AND SCANDENS are both beautiful plants, growing fifteen feet high; the flowers are large, and borne in great profusion. Those of erubescens are rose coloured with a mottled throat, and of scandens somewhat similar, but darker. They may be propagated the same as Mauraudia, and with as much ease.

ECCREMOCARPUS SCABRA is the popular, though rejected, name of another handsome climber; the flowers of this are of a bright orange colour, mixed with crimson. This seldom exceeds six feet, but it is very luxuriant; it is increased by seed easiest. It should be sown as for Mauraudia.

TROPEOLUM ADUNCUM, and, in a good situation, PENTAPHYLLUM.—The first is an annual with bright yellow flowers; it will run fifteen feet; it is of the easiest culture, requiring the treatment of half-hardy annuals. T. pentaphyllum is a tuberous-rooted species, most suitable for the bottom, as it does not run above five or six feet. The flowers are scarlet and green; it is propagated from cuttings; the root should be taken up and kept in a greenhouse through the winter. *Loasa aurantiaca* is another half-hardy climber; the flowers are deep orange, marginated with red; it runs from five to ten feet, and requires the usual treatment of such annuals.

THUNBERGIA ULATA, ULATA ALBA, AND AURANTIA will be found beautiful plants, most suitable for the base of rock-work, or for vases or baskets. In the latter situation, when mixed with *Lobelia heterophylla* or *gracilis*, or any other small creeping plants of another colour, they are truly beautiful; the colour of the first is pale buff, the thorax dark purple or velvet. The second, as the trivial name implies, a pure white, with a throat resembling ulata; the third, or aurantia, is a beautiful deep orange colour; thorax the same as the others. They are readily propagated from cuttings during the summer months, requiring a gentle bottom heat; the plants are usually kept in the greenhouse through the winter, and there form highly ornamental subjects.

We have selected these as the most common, and at the same time the most useful, as our observations apply more particularly to small suburban gardens than to those under the care of professional gardeners, to whom, of course, what we have said is already known, but even to the wise a hint is sometimes useful. The plants we have mentioned will, in most cases, be found sufficient; additions may be made to them from those which are more tender, and consequently rare, as may suit the cultivator's own taste and convenience. There are many others of equal beauty, especially in the convolvulus order, two of which we cannot pass over without notice; indeed, the order is redolent of beauty; even the convolvulus major possesses many charms; but those we would particularly mention are *Ipomea rubrocerulea* and *learii*, both of those bearing noble flowers—the first of a bright azure, the other a fine ultramarine; both extend ten or fifteen feet, but require a good situation. In a greenhouse they attain a much greater size, and form handsome additions. They are both propagated by cuttings, which require a slight bottom heat. The first is also raised from seed, which it perfects best under glass.

In conclusion, we may remark that not a single fence, nor the trunk of a tree, nor any other object capable of receiving or supporting a plant, ought to be left uncovered, the presence of climbing plants imparting an inexpressible air of freedom and friendship wherever they appear.

AMERICAN BLIGHT.—A correspondent near Hull requests us to state that he has found the following a radical cure for the American blight:—Take genuine whale oil, and with a painting-brush anoint the trees. Whale oil is destructive to animal life by instantly closing the pores of respiration.

PACKING FRUIT FOR CARRIAGE.

FRUIT sent to any distance should not be packed in baskets, as it is liable to be injured by being bruised. Boxes of deal should be used for this purpose, and of sizes according to the quantity to be sent. These boxes should be made of inch deal, and secured at the corners with iron clamps, and fastened with locks, each lock having two keys—one to be kept by the person who packs the fruit, and the other by the person who imports it. In packing the fruits, the heaviest should be placed in the bottom of the box, and the lightest and most delicate on the top. Thus melons, pines, apples, and pears, should be put in the bottom, each wrapped up in a piece of close paper, and packed amongst dry bran, if sent to a great distance. Over these may be packed peaches, apricots, plums, and grapes, each of the former of these wrapped in a piece of soft paper; but the grapes may be laid amongst the bran without paper, as the bran will fill up all the spaces between the berries, and thus prevent them from bruising each other. When they are unpacked, the bran will fall out from amongst them, and the finer particles of flour may be blown off them with a pair of small bellows kept on purpose, holding the bunch all the while up by the stalk. It may be as well to have one or two false bottoms for each box—that is, pieces of thin board, so as to go within the box, and to rest upon a lath nailed at each end. One of these boards should be placed between each layer of fruit, which will prevent their bruising each other. Strawberries, gooseberries, currants, and raspberries, should be packed in shallow baskets, and placed within the box, each basket carefully covered with a piece of paper securely tied over it.

NATURAL HISTORY OF THE NECTARINE.

THE nectarine is a variety of the peach, although former botanists consider it a distinct species, under the name of *amygdalus nuci persica*, from the fruit in its unripe state resembling, in smoothness, colour, and size, the covering of the walnut. The name of nectarine is supposed to be derived from nectar, the fancied beverage of the gods. The circumstance of both peaches and nectarines growing upon the same tree naturally, and even the same fruits partaking of the characters of both, justify modern botanists in considering them merely as varieties of the same species. The first instance of which we have any account of the fruits being observed growing upon the same tree is in a communication between Peter Collinson, Esq., and Linnæus. The second occurred at Loudesborough, then the residence of the Earl of Burlington, and was visited by several of the scientific people of the day. The third instance is commemorated by a painting in the possession of Mr. Lee, accompanied with a dissection of the two fruits. The fourth instance was observed at East Sheen, in the garden of William Gilpin, Esq.: of this there is also a painting by Mr. Hooker. The fifth was discovered on the wall of Sir John Arundel, at Huntingdon, in June, 1802. A sixth instance occurred in the garden of Mr. Wilmot, at Isleworth. The tree in this garden, which produces fruits with both smooth and downy coats—or, in fact, peaches and nectarines—is the Royal George, and seldom fails to produce them annually. It does not appear that ever any distinct marks were observed upon either, excepting in the smoothness and roughness of the skin only. The essential characters of their flowers, leaves, wood, and habit of growth being the same. They are supposed to possess a finer flavour than peaches, and even to surpass every other fruit on that point. It is a native of the same country as the peach, and probably travelled into this country by way of Italy. It is cultivated in all latitudes in which the peach is grown, and succeeds equally well in all.

PERSPIRATION OF PLANTS.—It has been long known that the leaves of plants and trees both give off and imbibe moisture: indeed, Dr. Hales conceived that the same effects occurred with respect to air. In his experiments on the absorption of moisture by and perspiration of plants, he found that the *helianthus annuus*, or sunflower, *lost* 1lb 14oz. during a fine dry day, and 3oz. in the course of a fine night; also, that during a rainy night it *gained* 3oz. He likewise calculated that the surface of the leaves is to that of the root as *five to two*; or, in other words, that a root presenting a surface of two square inches imbibed as much moisture as five square inches of leaves; but then the perspiration takes place by the leaves only, so that the plant is continually on the increase as to size and weight, by means of the nutritive matter imbibed by the root.

MAY.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN MAY.

Auriculas.—The soil in the pots should be kept moistened; they require a good supply during the blooming. In order to preserve them as long in flower as possible, you must saturate the earth about the hand-glass with water; if the weather should set in hot, well-water will do best for this purpose, being some degrees colder than that taken from tanks above ground. Give air, and cover up, as previously directed. Select as many as you can spare for seeding (small plants with two or more pips will do), and proceed with the recommendation given in our last number. Those kinds that produce the finest trusses should be among the selected, if they possess the other properties requisite for a show flower. The classes in auriculas are four, viz., green-edged, gray-coloured, white-edged, and self-coloured; and certain it is that by sowing the seed of any one of these, the whole four classes will be produced, such is the sportive nature of this flower. The plants selected for seed must have plenty of air, and may be allowed light showers; when the sun is out powerfully, shading will be necessary, for it is yet too soon to turn them into a north border. Lath shades are particularly adapted for this purpose, admitting a good circulation of air, and sufficient sun, without drawing the plants, which the glasses are very apt to do, without great attention; the construction is so simple, and the expense so trifling, that every amateur ought to possess the lath shades.

Biennial and Perennial Flowering Plants.—Wall flowers, sweet williams, stocks, carnations, and various others, if neglected the former months, will still succeed if sown the beginning of this month; they will quickly come up, and soon be fit for pricking out; therefore choose a spot in some shady situation for their reception, scatter the seed regularly, rake them carefully in, and if dry weather give them some water.

Tulips still require night protection, and during the day, protection from wind. If you can get at them conveniently, stir the surface of the beds; it would be better done before the foliage is fully developed; this is an operation that requires patience and great care, lest you bruise or otherwise injure the foliage, such injuries affecting the bloom more or less. Some florists use the bow of a large key for this purpose; in valuable collections the offsets are an important consideration, the latter occasionally pushing through the soil some distance from the old bulb; should a common hoe be used, it would, in all probability, cut the offsets, while the bow of a key, from its roundness, would pass over them without much injury. Examine your stage; see if the pods, rafters, pulleys, &c., require any repairs; also look to your cloth, and if there be any rents or broken ropes, have them attended to, that all may be in readiness.

Pinks.—Finish top dressing, if not yet performed.

Seed Boxes of Carnations, Piccotees, &c.—The woodlouse will soon make its appearance; these destructive insects will destroy a whole crop of the above seedlings in one night. The best preventive against their ravages is to provide two vessels filled with water at a convenient distance from each other, placing in the centre of each pan a brick, upon these bricks lay a board of sufficient length to hold the number of pans or boxes of seed you may have; thus a moat being formed round each brick (if sufficiently wide) will prevent the approach of snail, slug, or other enemies. The pans or boxes of seed must not be allowed to get dry—frequent waterings are necessary. Shade them during the heat of the day.

Carnations and Piccotees. — Prepare a few splints of wood from six to eight inches long. about the substance of a common skewer, and place one or more about the sides of such as are long in the stem, or are likely to be blown about by the wind; this will protect them from being broken. Many florists defer the placing of their blooming-sticks into the pots until the plants have attained a considerable height; this is an error: they ought to be placed as soon as the plants are potted, or within a week after. The roots of these plants growing in every direction through the soil in the pot, it is but fair to conclude that, by placing the sticks at this advanced period, considerable injury must take place; in some cases dividing many large fibres with a score or more laterals attached to them. Keep the pots clear of weeds, the surface of the soil open, and water moderately if the weather be dry.

It has been a common practice to pot auriculas, take off the slips, &c., immediately after the flowering is over; and the reasons given for the practice are no doubt weighty, viz.,—their remaining too much in a state of inactivity during the heat of summer, the season of all others in which they are most liable to contract a destructive disease. This disease is a loss of verdure, the plants becoming yellow and sickly. In order to guard against and prevent it, the plants should at the time be removed to a shady situation till August, when they should be fresh potted. They may be placed on a floor of ashes or gravel, upon rows of bricks, and must be duly watered according to the weather.

It has been found that about the end of July or the beginning of August is the best time in the year for the operation of potting on a double account. If potted in April or the beginning of May, the plants are apt to flower in autumn in a weak or imperfect state, and whether so or not, their roots fill the pots entirely in the course of the summer, exhaust the earth, and so are less strong and vigorous for flowering in spring, than if potted in August. If shifted then, they just get sufficiently established before winter, and by being fresh earthed and dressed, a vigorous growth of both roots and stems commence with the season.

To this may be added, that the slips or offsets being allowed to remain on the plants, obtain strength and more immediately become fine plants after being separated from the mother, than if taken off in April or May, and a great deal of trouble is saved in the rearing of them. By thus remaining on through the summer, too, the inactivity already mentioned is, in a great measure, prevented, as in order to nourish and sustain them, the whole plant must be in a state of active vegetation; they must, therefore, be duly supplied with water, both at the root and overhead.

Although it may not be a good practice to fresh pot them at this time, yet for the sake of the slips, if the rearing of auricula plants be an object, they should be fresh earthed at top whenever they begin to put out radicals on the surface, which is generally about the time the flowers begin to fade. The stems of the plants must be well earthed up, that the slips may the better push fibres into it, at the same time dressing off a few of the bottom leaves, and any that are decayed.

Hyacinths.—Continue to defend the beds of the more curious and capital kinds of hyacinths and tulips, ranunculuses and anemones, now in flower, from the full sun, heavy rains, cold nights, and all inclement weather.

Where shading and sheltering these kinds of flowers is regularly practised, it will preserve them in their fullest beauty, at least a fortnight or three weeks longer, than if they were to be fully exposed; they will also be much finer.

Hyacinths past Flowering.—When the hyacinths are past flowering, and the leaves decayed, let the roots be taken up, particularly the fine double kinds. As soon as these roots are taken up, they should be spread to dry and harden, in a somewhat shady dry place upon a mat, or on some clear dry ground, or the floor of any airy room, for a fortnight or three weeks; then trimmed, cleaned, and deposited upon shelves, or in boxes, till autumn, for re-planting.

Tulips done Blowing.—When tulips are past flowering, it would be proper that the seed pod be separated from the top of the flower-stalk, especially the principal, capital varieties; for the fine kind of tulip should not be permitted to ripen seeds, for those would draw nourishment, and weaken the bulb.

When they have done flowering, and the leaves and stalks begin to wither and decay, the roots should be taken up, especially the most estimable curious sorts.

Choice Plants in Pots.—Choice plants in pots must now be duly attended to with water; also let the flower-stalks be neatly trained to sticks, as they advance, stirring the earth frequently with a small stick, that it may better admit air. Those which are kept out of doors, in order to be carried into the house in succession as they come into flower, should be plunged into the earth, and if placed in rather a shady situation, the season of their flowering might be prolonged. If any slips were made about the end of March or first of April, and were put into small pots, they will now require to be repotted into middle-sized pots; plant them in rich earth, water and place them in the shade for a few days, then plunge them into the ground; they will be fit for being removed into full-sized pots in July and August, and will get fully established before winter.

MANAGEMENT OF TENDER ANNUALS.—The cockscombs, tricolors, balsams, globe amaranthus, egg plants, and other tender curious annuals, must be removed once more into another hotbed the beginning of this month. Be sure to admit air every day to the plants, and particularly when there is a good heat, and when there is much steam; for, if this be not observed, the steam will destroy the leaves of the plants, which would, in that case, make an unsightly appearance.

LESS TENDER OR HARDIER FLOWER PLANTS.—Plant out the less tender or hardier annuals into the natural ground, and some in pots. This may be done any time after the middle of the month, if the weather be settled in tolerably warm, taking advantage of a moist season if rain happens. Those which were pricked out last month, on a slight hot-bed, will be arrived to a good size for planting out towards the latter end of this month.

PROPAGATE DOUBLE SCARLET LYCHNIS.—Now propagate perennial fibrous-rooted plants by the cuttings of the young flower slips. By this method of propagation, and by bottom offsets, the young plants retain the property of the respective parent plant, in regard to double flowers, colour, &c., which is not attainable with any certainty by seed.

TRANSPLANT SEEDLING PERENNIALS, AND TRIENNIAL FLOWER PLANTS.—Transplant or prick into nursery beds some of the seedling perennial and triennial flower seeds, which were sown in March. Sow triennial and perennial flower seeds. The sorts which will still succeed, are July stock flowers, wallflowers, sweetwilliams, columbines, carnations, and pinks; likewise, scabiouses, Canterbury bellflowers, hollyhocks, and French honeysuckles, and most other sorts.

CARE OF FLOWER BORDERS, BOX EDGINGS, ETC.—The general flower borders, and other compartments of the pleasure grounds, &c., should now be carefully continued in the most perfect good order.

SECOND WEEK IN MAY.

AURICULAS.—May is the best time to repot auriculas, and should be commenced as soon as they have done blooming. It is customary with many florists to leave this operation till August. With deference to those gentlemen, I beg to say I have never witnessed, produced from autumn-potted plants, such extraordinary growth and blooms from those produced from plants potted in May. It is this system that, by long practical experience, attended with the greatest success, I most strongly recommend to my young readers. These plants make their principal growth during the month of May. The main body of roots, upon which the plants depend for their future growth, strength, and bloom, are thrown out at this season, penetrating the soil in every direction. The reader will, I trust, see the impropriety of disturbing or otherwise injuring these roots; also, the improbability of again re-establishing themselves sufficiently to afford that source of nourishment they otherwise would, if not disturbed at this late season — namely, August. The autumn growth of the auricula is but trifling, compared with that of the spring. At this season they lose their magnificent spring foliage, and become much reduced in size; and, from October till the middle of February, are comparatively dormant. Autumnal potting only partially prevents autumnal flowering. One thing is worthy of notice, and argues much in favour of spring potting—namely, the second bloom of an April-potted plant is always superior to a second bloom of an autumn-potted plant; the former having been frequently shown, and taken first prizes, while the latter are seldom, if ever, fit to exhibit. Repot your auriculas as soon as they are on the decline of flowering. The plant being removed from the pot, take nearly the whole of the old soil away, and examine the top roots; if it be long or of more than two years' growth, cut one year's growth away, and if any disease appear, cut that away also, and apply a little powered charcoal to the wound. The young plants, if in small pots, will only require shifting into the blooming size—very little soil need be taken from them. Provide a quantity of potsherds (broken garden pots,) put to the depth of one inch and a half into each pot, and fill with your new compost sufficiently to receive the plant, so that the shoulder be half an inch below the rim, and as you add the remainder of the compost, gently lift the roots with a small thick, so that the compost may get between them, for if left one on the other, they will not thrive so well; this done, give the pot two or three gentle taps on your potting-board, to shake the soil well to the roots, fill up to the rim, and press the compost down moderately. Remove such offsets as are rooted, the larger into smaller pots, and the smaller round the rim of a pot, to the number of six or eight, according to the size; give but little water, and place them in a shady situation under a hand glass for a short time.

Tulips.—Attend to the tulips as directed in last month's number, and if getting into colour, the cloths ought to be in readiness, if not already on.

Carnations and Piccotees.—See last month's number.

Pinks.—The late rains have done much for these plants, in warm soils they are putting forth their blooming stems. Those varieties that produce small and thin flowers may have their stems reduced to one or two (if required for exhibition), leaving the larger growing sorts for the present. If you are short of stock of any expensive or scarce variety, it is better to stop them from blooming at once, in order to make as much stock as possible. The latter end of the month will be a good time to plant out your dahlias. If your soil be of a sandy or open quality, you will require some sort of manure that will retain the moisture, more particularly so if you have not a good supply of water at hand—cow manure, river mud, or strong loam, will be found useful. By mixing a spadeful or two at the bottoms of the holes where you intend planting, or round the plant at a short distance, it will greatly assist them.

Auriculas may now be removed to a northern aspect; afford protection to those in flower, and expose those out of bloom to the benefit of moderate showers.

Tulips are now becoming more and more interesting. Those under canvas may have all the air the weather will allow you to give them; they must, however, be shaded from the powerful rays of the sun during the day. The management of shading is important at this period; you must be careful not to draw them; you will, therefore, particularly attend to the putting up or letting down the top cloth and side cloths as the sun moves round, until four or five o'clock, when, if there be no wind to disturb the blooms, and the weather be genial, you may fully expose them up to the latest hour you can conveniently attend them. A moist atmosphere should be kept up under the canvas during night, by watering round the beds with a rose watering-pot. This will be accomplished sufficiently to assist in the enlargement of the blooms.

Pinks.—Continue reducing the blooming stems of those intended for exhibition, taking care to leave some of the late shoots, that your blooms may not come all at one time; if you attend more than one show, this precaution will be necessary. If you wish to save seed from any particular variety, leave the whole of the stems. Pinks seed more freely when not trimmed. Keep the surface of the soil open; the fineness of your bloom greatly depends on this operation being well attended to.

Carnations and Piccotees will require the same attention as directed in our last number in regard to watering. If any are spindling up for bloom, tie them at once, keep the pots clear of weeds, and the surface of the soil removed to the depth of half an inch. Pay the same attention to the seed boxes or pans.

Bulbous Flowers in General done Blowing.—Spring crocus roots of all sorts, and snowdrops, crown imperials, and all other forward blowing bulbous flower roots which have done blowing, should be taken up when their leaves decay, especially such as have stood unremoved two or three years, and increased by offsets into large bunches. Most of the capital varieties of fine hyacinths, bulbous iris, jonquils, polyanthus, narcissus, and other similar bulbs should generally be taken up every year, after the flowers are decayed. The bulbs, when taken up, must be dried in the shade, and afterwards put up till planting time, which is any time, in open weather, from September till February.

Autumn Flowering Bulbs.—The colchiums and autumnal crocus will be in a condition for removing or transplanting by the end of the month or beginning of next, and also the yellow autumnal narcissus, and such other autumnal flowering bulbs whose leaves now decay. They must be taken up in dry weather, and the small offsets carefully separated from the main root, and either planted again immediately, or spread upon a mat, out of the sun, to dry; then put up till the last week in July, or the first week in August, when they are to be planted again for flowering the same year in August and September.

Double Wallflowers. — Propagate double wallflowers by slips of the young shoots off the head. The plants raised by this method will retain the double property and colour of the flowers, in all respects the same as the parent plant from which they were slipped.

Tender Annuals.—The tender annuals which were sown in April should now be pricked out on a hotbed. They should be kept in a steady temperature of sixty or sixty-five degrees, and plentifully supplied with water, and placed as near the glass in the frames as possible, in order to prevent them from being drawn up slender. The mould in which they should be planted should be light, and of the richest nature. When the plants have made some progress and nearly filled the pots with their roots, they should be carefully shifted into small forty-eights, and again placed near the glass in the frames, and a brisk, glowing heat kept up to them. In this way they should be kept growing until their final shifting into pots corresponding to the respective sizes of the different species of plants cultivated. Balsams require pots ten or twelve inches in diameter, cockscombs' pots, eight or nine inches, &c.; during their whole culture, air should be freely admitted to them, when the weather will permit; and as the plants advance in height too near the glass, the frames should be lifted up.

Sowing Hardy Annuals.—All kinds of hardy annuals may still be sown, both where it is intended that they are to remain to flower, and also in beds in the reserve garden, to be afterwards transplanted into the flower borders. Those which were sown in March and April should now be thinned, where they may have been too thickly sown, to a moderate and regular distance, according to the size and habit of growth of the plants. If the weather be showery, take advantage of it for the purpose, but if the weather be dry, let them be moderately watered, after thinning, to settle the mould round the roots of the remaining plants, and forward their growth.

Training and Supporting Plants.—Such plants as are planted against walls or espaliers should be now examined, and their young shoots nailed or fastened to the wall or trellis. When the object is to obtain a thick mass of foliage, the leading or strongest shoots only should be nailed in, and the lateral or weaker branches allowed to remain in their natural positon; but when a profusion of bloom is desired, and such is the case generally, particularly with rare and delicate plants, pruning to a certain extent must be attended to. Therefore, in all other cases relating to pruning, judgment must be formed of what wood is likely to produce flowers, and what is not. As much of the former must be had in as can be done without confusion or crowding, and a quantity only of the latter to fill the naked parts of the wall or espalier, and to provide a supply of such wood for the following season, as will in its turn produce flowers also.

Roses.—Thin out the weak and over-crowded shoots, and propagate from them, and remove all suckers and side shoots from those budded last year, and suckers and useful shoots from the stocks. Water with liquid manure, sparingly at first.

Fuchsias.—Thin out the young shoots, train some on *bushes*; but they are most handsome trained to one stem. Clear away all protecting material, and dress the soil about them.

THIRD WEEK IN MAY.

Tulips.—Shade and protect them as before directed; examine your breeder, and carefully mark such as are worthy of being grown, and at once dig out, and throw away all that is worthless; this will save many errors and a deal of trouble.

Carnations.—Tie up the blooming stems as soon as you see them sufficiently advanced to admit it; for if allowed to hang about, the wind will break them off. Keep the surface of the soil open, and water them if necessary.

The Spittle Fly.—A small insect that encompasses itself in a white froth, and is found in abundance in the southern wood, by some called the old man tree, is now becoming troublesome. This insect seriously injures piccotees, carnations, and pinks, if not attended to in the early stage ot its progress, taping the stems on one side, and causing them to grow variously deformed. The little creature is very tender, and more particularly so when it makes its first appearance. The most ready way to clear the plant of this pest is to press them between your fingers, while in their hiding-place; a slight pressure will be sufficient to destroy them, and will not in the smallest degree injure your plants.

Pinks.—Some of the forward varieties are beginning to show their buds. Attend to the reducing the bloom stems if not completed; keep them clear of weeds and the surface open. You may now think of getting your beds for keeping the pinks in readiness. The scarce and valuable sorts should be piped as soon as possible. I also recommend you to pipe sufficient of all the varieties you intend growing, for one strong bed; early plants stand the winter better than the late ones, and also furnish you with a greater stock for the next season. By making up the bed under a north wall or fence, you save considerable trouble in shading, and the plants strike equally well as in a south aspect. Having practised this system for a number of years without a single failure, I can recommend it to the young practitioner with confidence. Prepare some spit dung, with the heat nearly spent, so as it be sweet; little else need be considered; give it a thorough and good wetting; spread it to any convenient width or length you may require, the thickness of from six to nine inches, when well beaten down with the back of your spade to a smooth surface. On this surface your piping composition must be spread to the thickness of three to four inches, and patted down to make it lie close. The compost for piping in should be of a very sandy quality; one third sand is not too much. Leaf mould, very old manure from a cucumber bed, or in the absence of either of the latter, if your garden mould be light, it will make a tolerable shift; to whichever you may use, add one-third sand. The piping compost should be passed through a very fine sieve.

Ranunculuses.—Keep the surface open, and water them liberally.

Dahlias may now be planted out; select plants with fine clean stems; those with stunted thick stems will not succeed so well.

Training and Supporting Plants.—Climbing plants and shrubs should be regularly and neatly nailed to the walls, poles, or supports upon which they are to be trained, and all herbaceous and annual plants should be supported where they require it. Nothing looks more slovenly than plants rambling into confusion or blown about, and broken by high winds and heavy rains. The pruning knife should be freely used in the arrangement or disposal of them, and such branches as may be broken or injured, as well as a portion of them where they grow too thick, should be removed. In supporting plants in the flower borders, much ingenuity may be displayed by selecting supports suited to the habits of the plants. The rambling growing kinds may be judiciously supported by using branches of trees with many twigs upon them, and the more crooked and rustic branches of oak or other rugged growing trees, either with the bark left on or taken off, will form excellent conductors for sweet peas, convolvuluses, and such like rapid-growing plants, and to such the plants will naturally affix themselves sooner and more firmly than to bare poles, or finely painted sticks, which have little of that natural appearance which should harmonise in all parts of the flower garden. Strong growing plants require more substantial support, and perhaps there are none better than neat iron rods. Whatever conductors or supports are used, care should be taken to hide them as much as possible, and in tying them to this support, it should be done so as to leave the plant in the natural form as far as practicable. This can never be done if the plants once be allowed to obtain too great a size or age. The supports should be placed to them before they really want them, and as the plants advance in growth, be neatly and securely trained to them. From the want of attention to the training and supporting of flower garden plants, often arises that disorder which is frequently apparent, and if that attention is not paid at an early period of the season, it cannot afterwards be corrected. Climbing and creeping plants, from their profusion of blossom and their utility in covering disagreeable objects as well as the assistance which they afford us in producing something of a picturesque or natural appearance in gardens and shrubberies, are too much excluded from our gardens in consequence of the great confusion into which they are too often allowed to run, from a want of training and support while young, whereas when properly attended, they even of themselves give a degree of well-kept appearance to the other parts of the grounds, producing pleasant associations, and affording both shelter and shade.

Transplanting Seedling Perennial and Biennial Plants.—Perennial and biennial seeds sown last month or in March will now be ready to transplant or prick out into nursery beds in the reserve flower garden, there to obtain sufficient strength to fit them for being finally planted out. The most convenient mode of cultivating these is to prick them out in beds four feet wide, and place the plants about six inches apart each way. After they are planted, they should be shaded both from drying winds and powerful sunshine, and liberally supplied with water, as they my require. These are to remain here till autumn, when they may be planted out in the flower borders.

Propagating Herbaceous Plants by Cuttings.—Many of the more delicate herbaceous plants are propagated by cuttings of the young shoots, particularly those sorts that are not readily increased by dividing their roots; as these plants advance, their propagation should be attended to; a shaded situation in the reserve garden will be found the most convenient place for this purpose. When the operation of propagation is to be carried to a considerable extent, narrow beds should be prepared for the purpose, of light sandy peat, or light sandy loam, and some, of pure white sand, to the depth of from three to nine inches, according to the size of the cuttings to be used. These beds should be of the breadth of the garden hand-glasses, which should be placed over them as soon as the cuttings are planted, and kept carefully shaded until they have all struck root, when they may either be planted out into nursery beds or otherwise, according to circumstances.

American Plants.—The flowers of the rhododendrons and azaleas will now begin to fade, when they should all be cut off, removing at the same time the whole of the seed vessels and all the stalk. By the adoption of this plan, the energies of the plants, which would have been expanded on the useless seed vessels, go towards forming blossom buds for another season; of course none of the leaves, or any of the growing buds which push out just below the bunches of flowers, are to be taken away.

Begonias will now require an increased supply of moisture; as they advance, they should be shifted into larger pots, if large-sized specimens be wanted.

Primulas. — Pot off seedlings, or shift those previously potted if they require it; keep them in a rather shady situation; be very careful that they never get thoroughly dry.

Roses.—Water regularly and occasionally with manure water. Those out of flower should have the young shoots regulated and thinned, so as to form handsome heads for next season.

Planting Evergreen Shrubs.—Evergreens of all kinds may be planted any time during this month with success. If the weather be not showery it will be necessary to water them, both at their roots and over their heads two or three times a week with the garden engine, and if the ground above the roots be covered with long littery dung or other similar matter to resist the drought, a great saving of watering will be attained. The shoots and leaves should never be allowed to become dry and parched, either by the sharp winds which we often have at this season, or powerful sunshine, which would be equally injurious to them at this period, when they have not yet struck root into the ground. Water is the principal food of plants, and if bountifully applied to newly planted trees, will greatly assist them in their re-establishment.

FOURTH WEEK IN MAY.

Auriculas.—Do not forget watering them, and removing all dead leaves, weeds, &c.

Tulips.—Before the bloom is over, carefully mark those that are heavy in colour or otherwise faulty, in your best bed, in order that they may be removed, and select from your out beds those more perfect to supply their places for the next season.

Pinks.—Podding-up for show blooms must now be attended to. Examine the topmost bud, and see that it be perfect, that there be no extra scale (or other deformity) growing on the sides of the flower cup (or pod) before you take the others away; should this be the case, remove it, and leave the second bud. Those varieties that produce thin flowers may be reduced to one pod, but it is not advisable to do so with the larger and more difficult flowering sorts. On the latter leave three till the main one is nearly full grown, when you may take away one more, leaving two till the nose of the blossom is safely out of the pod, then, if you are not wanting a second bloom from the same stem, remove the other also. Keep the surface of your bed wet, if possible. Mulching with a fat spit dung will much assist; it retains the water a considerable time, giving out a moist atmosphere during the heat of the day, which considerably tends to enlarge the blossoms. Attend to your seed pans or boxes of pinks, &c.; keep them well moistened, and as soon as the young plants are strong enough, by all means plant them out either in pots or beds. I give the preference to the latter; they grow so much stronger in the ground.

Carnations.—Tie up the blooming stems as they advance. Where they are numerous, you should reduce them to one, two, or three, according to the strength of the plants. If the weather continue hot and dry, they will require a good watering daily, which must not be applied till the sun has left them.

Heartsease.—Plant your cuttings in a north border, and keep them well supplied with water. Bend hoops or sticks over them, and shade, during the time the sun is out, with old matting. They root much sooner under this treatment than under glasses.

Dahlias.—Tie your dahlias to the stakes as soon as planted out—this is far better than making use of small twigs for the purpose.

Inoculate and Lay Roses.—Inoculate roses: this is practised upon all curious sorts, which do not increase freely by the more general mode of propagating roses by suckers from the roots or layers, for some sorts are very barren of suckers, such as the moss, the province, &c., and, therefore, where an increase of such kinds is wanted, it may be produced by inoculation. Standard rose-trees have been for several years past introduced as an ornament in flower-gardens. Long stems of the common dog-rose are got from the wastes, and planted where the standards are required. These are budded with the desired sorts, and kept securely staked, and annually pruned, in order to produce lofty tufts of their beautiful flowers. The varieties of roses are now enormously increased, and roseries are now an indispensable feature in every garden. Roses are, however, chiefly propagated by layers from shoots established for the purpose, and not only are suckers wanted to be layered, but the whole branched head is laid prostrate, and every twig is layered.

Tender Annuals.—The prime cockscombs and tricolours, globe amaranthus, double balsams, and egg plants, and such other curious annuals as were, in order to draw them up tall, placed in drawing-frames or glass cases, will now need to be often refreshed with water. These and many other tender annuals are raised chiefly for the purpose of furnishing the greenhouse stage, when the plants are out; also for decorating rooms in dwelling-houses, or for planting amongst other plants in the flower-garden.

Hardy Annuals.—If any of the patches of hardy annuals in the borders remain too thick, let them be thinned, and give water. Many still sow some quick flowering annuals to bloom in autumn, such as ten-weeks stocks, candy-tuft, virgin-stock, mignionette, &c.

Cyclamens.—This is a proper season to transplant cyclamens. The leaves being now decayed, you may take up the roots, and part the offsets, if any: then new prepare the mould, and plant them again. The principal varieties of this small but delicate flower should mostly be planted in pots, for moving to occasional shelter, or some hardier sorts may also be planted in the ground, under protection of a warm south wall, &c.; for, if in a more exposed situation, the roots would be liable to suffer in winter, and not flower well; but, when these roots are planted in pots, they may be moved into the greenhouse, or placed under a garden-frame in winter. This plant begins to flower in February or March, and some in autumn and winter. It grows but a few inches high; but the flowers are of curious structure, and delicately beautiful.

Transplant Seedling Perennials and Biennials.—Transplant from the seed-beds the wallflowers, stock, July flowers, sweet-williams, carnations, pinks, and columbines, &c., sown in March or April. They must now be planted into nursery-beds, about six inches asunder, and give them a good watering. The plants are to remain in these beds till autumn or spring, then to be planted out for good into the borders or spaces where they are to remain, and in which they will all flower next year in their respective seasons.

Propagate Fibrous-rooted Plants.—Propogate perennial fibrous-rooted flowering plants, by planting cuttings of the young flower stalks. By this method the double scarlet lychnis, lychnideas, double rockets, and several others of the like perennial plants may be increased.

Guernsey Lily, and other Autumnal Bulbous Roots.—You may now transplant or remove any of the autumnal flowering bulbs, as Guernsey and Belladonna lily, &c. But these need not be taken up oftener than once in two or three years, especially the Guernsey lily, which is then most necessary to be done, to separate them from the increased parts, or offsets: by taking them up, parting them, and then planting them into a new-prepared bed, or singly in pots of new compost, it will encourage them greatly, and they will shoot and flower much stronger. They may be either replanted directly, or soon after removal, or housed till July or August, and finally planted, and which, in the full bulbs, will all flower in the same year in autumn; and the offsets, after having one or two years' growth, will also flower in perfection. During the winter season, the beds or pots in which the roots are deposited should be sheltered with a frame and glasses, or the pots, &c., removed into a greenhouse or frame, as above advised, in their flowering state.

Training and Ordering Flower Plants.—Continue to support with sticks all the tall-growing flowering plants, and long stragglers and climbers, according to their growth. This work should be duly attended to, for there is none more necessary in a flower garden than to have the flowering plants standing firmly in their places, and neatly trained in an upright growth. Likewise give proper support to climbing plants, &c., for they will now require that assistance.

REGULATING THE FLOWER BORDERS, &c., IN SHRUBBERIES.—The general flower borders, beds, shrubbery-clumps, and other ornamental compartments of flowers and shrubs, &c., in the garden, should always be continued remarkably neat, in the best regular order, and kept very clear from weeds.

THE FRUIT GARDEN.

FIRST WEEK IN MAY.

THINNING WALL FRUITS.—The thinning of fruits, when they set too thickly on the trees, is a very important branch of fruit-tree culture. That all sorts of fruits would be benefited by being properly thinned, is evident; even the most common gooseberry and strawberry would be increased in their size and flavour; how much more so, then, peaches, nectarines, grapes, and apricots? and, although seldom practised, plums, cherries, and apples would be improved by the process. In favourable seasons, peaches, nectarines, and apricots, set in clusters upon the trees, which if not removed, would push each other off; but this natural effort would much exhaust the trees. It is better, therefore, to commence the operation of thinning soon after these fruits are set; and it should be performed with a pair of sharp-pointed scissors, thinning out those that are most crowded, and reducing each cluster of fruit where they are set so thick as to touch one another to a reasonable extent. The operation, however, must not be completed at this early period, or circumstances may occur which we could not foresee, that may cause a great portion of the crop to fall off, reserving for future thinnings in June, and in some cases a final thinning in the beginning of July. As a general principle to be kept in view at each thinning, the largest and best-formed fruit, and such as are most favourably placed, should be retained: all others should be taken off, unless upon those shoots or parts of the tree where the crop may be less abundant. In such cases, a few of the less handsome fruit may be left, which will improve as they advance towards perfection. On healthy and fully established trees, the crop should be left in a greater quantity; but upon sickly and newly-planted trees, and upon sickly or weak shoots, even of healthy trees, they should be thinned to a much greater extent. No general rule can be laid down as to the distance that each should be allowed to stand from the other; a variety of circumstances is always to be taken into consideration, such as the kind of fruit, the size to which it attains, the health and state of the tree, &c. But it is always better to thin well, as the ultimate bulk of fruit will not be decreased, gaining individually what is lost in number, and the flavour will consequently be improved.

GENERAL CARE OF WALL TREES.—Wall trees will now require great attention, both as regards protecting them from cold, cutting winds, and removing the protection of every sort as soon as the state of the weather will admit of it. It is at this time that they are injured by being protected at all, by allowing the branches or other covering to remain longer on them than is really necessary, which draws up the young shoots in a weak and tender state, and unfits them to stand the full exposure to the atmospheric air and sunshine. Coverings, of whatever kind they may be, should not be taken off all at once; they should be removed by degrees, and the young shoots hardened progressively to the full exposure of the air. The leaves of peaches and nectarines, are at this time, from a variety of causes, apt to become curled and blistered; these should be picked off, and carried away. The trees should then be well watered over the branches with the garden engine, applying the water with force, first from the right hand side, and then from the left, in order that both surfaces of the leaves may be thoroughly cleaned. This operation should be performed early in the afternoon, or even in the forenoon of dull, cloudy weather, so that the leaves may become dry before sunset. This operation, if persevered in, will keep down insects, by dashing them off, and by promoting vigour in the trees, which renders them less susceptible to their attacks. Mildew may be greatly decreased, if not perfectly cured, by dusting the leaves over on warm, sunny days with flour of sulphur, which ignites by the action of sunheat, to the extent of destroying the parasitic malady, without injuring even the most tender foliage. A more speedy application of sulphur is by mixing it with the water used for syringing the trees. Aphides, or green-fly, will be completely kept under by a free use of the water engine; but should they gain ground upon certain parts of the tree, it may be removed by dusting the parts affected with Scotch snuff, pounded tobacco, or tobacco-water applied by the syringe. These simple means will effectually clear the trees of these pests. A failure of success is solely to be attributed to a want of energy in the application.

Summer Pruning of Currants, Gooseberries, and Raspberries.—It is not a very common practice to summer prune currants and gooseberries; but it is essential to their welfare, and to the production of fine fruit, if judiciously performed. It also in a great measure tends to prevent the ravages of the caterpillar. No doubt, a moderate degree of shade contributes to the swelling of the fruit to a full size, but if by too much it be excluded from the sun and air, it will be wanting in flavour. For which reason, the hearts of the plants should be regularly thinned of the cross and water shoots, and all suckers rising about the roots ought to be carefully twisted off as they appear. If part of the shoots that rise about the roots of raspberries were twisted off or otherwise destroyed at the time also, it would let; in the air about them the shoots left for bearing next year would increase in strength, and the fruit now upon the plants, in size. In the gathering of green gooseberries for tarts or puddings, some should be pulled from each bush, and always from the thickest part of the bush, not entirely stripping the plants most conveniently situated—a thing too frequently done.

Summer Dressing and Watering Strawberries.—Strawberries planted in rows should now have the runners cut from them, and be completely cleared from weeds. By carefully divesting the plants of runners, the fruit will be considerably advanced in size. If the plants have been planted in lines, about two feet asunder, and eighteen inches in line, every root should be stirred up with the hoe. If the weather be very dry, strawberries in flower should be occasionally, and those having set their fruit should be frequently, refreshed with water. The garden-engine should be employed in this business, if the plantations be anywise extensive, as using the watering-pot would, in that case, be too tedious a method.

Newly Grafted and Budded Trees.—About the middle of this month look well over all grafted trees, and let the clay be taken off, and at the same time let the bandages be loosened. All the shoots that rise from the stocks, below the graft, must be immediately rubbed off, in order that the graft may not be robbed of its nourishment. Let the same rule be observed with the trees budded last summer, keeping the stock clear of all shoots which would draw any great part of the nourishment from the bud.

Fig Trees.—These require particular attention in this month. The young shoots recently put forth, and which have advanced two or three inches in length, should have their points broken off. This mutilation brings forth incipient fruit to ripen next summer.

Destroy Snails.—Snails often make great havoc amongst the choicest kinds of young wall fruit. They particularly frequent the apricot, nectarines, and peach trees, and will do mischief to these kind of fruit if not prevented. These trees should be often looked over early in the morning and in the evening, and after showers of rain, at which time these animals come forth from their holes to feed upon the fruit, and may then be readily taken and destroyed.

SECOND WEEK.

Apples, Pears, Plums, &c.—Apple, pear, plum, and cherry trees, either against walls or espaliers, should be carefully looked over about the middle of this month; for these trees, as well as the peach and nectarine, should also be divested of useless and ill-growing shoots, and the proper ones trained in regularly. But it should be observed that, although these trees mostly continue bearing many years on the same branches, and do not require a regular annual supply of young wood, as in peaches, nectarines, &c., it is still proper to leave in different parts some of the best-placed moderate-growing side-shoots, but particularly in the most vacant places, to train in between the main branches, and a leading one into each branch; for it is essentially eligible to obtain a moderate supply of the best regular-placed stock at this time to choose from in the general winter pruning. The shoots which are now left must also, when of proper length, be trained in close to the wall or espalier, and each shoot must be laid in at full length. The apple, pear, plum, and cherry trees, should never be shortened only in particular cases. Where there is a very great vacancy, it may be proper to shorten some of the adjoining young shoots of the year to three or four eyes towards the latter end of this month, or in June, in order to promote their producing a supply of lateral shoots the same season, to supply the vacant parts. Young wall and espalier trees, that are advancing in a training state, should also be attended to now in their early shooting, to displace the ill-placed growths, and retain all the well-placed proper shoots for regular training, both for an additional supply of branches, in the general formation of the trees, and to form future bearers for the production of fruit. Where the pear-trees which were grafted in the spring have not taken, cut them off a little below the graft, at a joint or bud. The tree will then throw out a great number of healthy shoots: rub these all off except such a number as will be sufficient to fill the wall, nailing those up to prevent the wind from breaking them. About the latter end of July, the shoots will be fit to bud, which should be done about that time.

Vines.—Vines now shoot vigorously, and will produce, besides bearing and other useful shoots, numbers that are altogether useless, which must now be cleared away. It is not every summer that is favourable to the ripening of grapes; but it is in every one's power to give them great assistance by a right ordering of the vines, both at this early time and hereafter, and where this is properly executed the bunches of fruit will be forwarded accordingly. To do this, the vines must now be perfectly well cleared from all useless shoots of the year, and at the same time all the fruit-bearers and other well-placed useful shoots should be nailed up regularly close to the wall. This work should be done before the shoots begin to entangle, or in any way interfere with each other; for a great deal of advantage attends this early dressing, both in affording an opportunity of performing the work with more expedition and regularity, and for the greater benefit of the trees and fruit, observing that all the immediate bearing-shoots which now discover the advancing young bunches of fruit upon them must be left and stopped at the next joint above the fruit, as mentioned below; and such other shoots as have strength and are very well situated for training on for the purpose of bearing fruit next year must also be left in places where they are apparently wanted, and can possibly be trained in. But all weak, straggling shoots, such particularly as often rise immediately over the old wood, should be cleared away, except in casual vacancies where no better occur; and even strong shoots that are destitute of fruit, not wanted, or are not well placed for training, should be mostly displaced or thinned—being, however, careful to leave in every part as many of the best-growing, well-placed shoots as can be commodiously trained on with regularity. Then let all the fruitful and other proper shoots now retained be nailed up close to the walls, generally at their full length, for the present, where there is room to extend them, and let every shoot be laid in straight and clear of each other in a regular manner, so that all the branches and fruit may equally enjoy the advantage of the sun and free air. If vines have been trained on the spur-bearing principle, and have covered the wall or space allotted them, all the summer dressing necessary for them is stopping every shoot immediately beyond the fruit, and pinching off. also, all tendrils and side shoots as soon as they appear; thus the fruit will enjoy all the strength of the tree, and also full air and light, so necessary for their maturation. The above early summer dressing of vines in respect to pruning may be effected with the finger and thumb whilst the shoots are quite young and herbaceous, as the useless shoots may then, without a knife, be very expeditiously rubbed off close to the mother wood.

New Budded Trees.—Look to the trees that were budded last summer; they will now be advancing strongly on the first shoots, and should be looked over, in order to take off all shoots that rise from the stalk below or above the bud shoots of inoculation.

Strawberry Plants in Blossom.—During the time these plants are in blossom, the beds should be well watered; in dry weather, about three times a week, which, being a very needful work, should not be omitted. Strawberry beds, in which the plants have been generally kept to distinct bunches on each main stock or head, should, in some principal sorts, have the grossest advancing runners of the year trimmed quite close, in order to encourage the flowers and fruit more effectually, but taking, at the same time, particular care in this, that when a supply of young summer plants of the above are required for new plantations, to leave a proper sufficiency of the best for that occasion. The advancing runners of any strawberries in edgings to beds, borders, &c., or growing near walks, should also be occasionally trimmed within proper bounds.

Gooseberries.—The gooseberry, though so useful and early a fruit, is very much neglected in many gardens, no other attention being paid to it than to prune the tree at random, and often with a pair of shears once a year. They should be prunned twice every year; all redundance of both shoots and fruit should be removed at this time; thinning both prevents a waste of vigour, and the latter are as good for sauce or gooseberry cream as the larger. Soon after this pruning, about the middle of May, it will be proper to look over the trees, and pick off any caterpillars that may be on them, and also remove all superfluous or diseased shoots and branches.

Destruction of Insects on Fruit Trees.—Aphides, or plant lice, are a very numerous and destructive tribe of insects. These may be destroyed by tobacco smoke;

for this purpose, a fumigating bellows is necessary. Bellows are useful in forcing houses, and also for wall trees, assisted by a fumigating cloth, made of light canvas, and sufficently large to cover any infested tree; this being closely fixed along the top, and at each side of the tree, the smoke is puffed in at the bottom of the stem, and the smoke being thus confined will remain long enough to kill the insects. Single plants, in pots, whether in the greenhouse or stove, such as roses, &c., may be fumigated in a frame by themselves, instead of making a whole house disagreeable to get rid of insects partially injurious. Be always careful that your trees get dry before night, and be sure never to water them when the sun is on them, which will injure the leaves.

THIRD WEEK IN MAY.

WALL TREES.—Let all the trees be looked over as early as possible, before they advance into disorder on their first shoots, and cleared from all such of the new shoots as are useless and ill-placed; at the same time be particularly careful that a plentiful supply of all the well-placed shoots be retained, and when of due length, trained in close and regular to the wall. The spring regulation of the growth of fruit-trees is by far the most important operation to which they are subjected. At this time the pruner can give the desired form, the requisite vigour, and the distribution of the various members of the tree. Cutting away redundant growth is only the correction of previous neglect, for no shoot which it is necessary to displace, should ever have been allowed to come forth. The assiduous manager regulates his trees by disbudding with his finger and thumb, not with the knife. If a fruit-tree be allowed to produce a numerous birth of useless shoots, and which, from the form imposed, must be sooner or later pruned away, that tree sustains an injury which is not easily remedied. After a fruit-tree, whether trained on a wall, a trellis, or an espalier, has arrived at the desired extent of branches, it is then expected to continue moderately healthy and fruitful, and the whole care of the manager is to keep it so. But if a tree be allowed to become luxuriant in one part of the season, and anon checked by a sweeping deprivation of its young wood, derangement of its constitutional balance takes place; and that moderation of habit, so desirable in trained trees, is completely destroyed, and, consequently, irregularity of growth and barrenness will be the result. In order to have moderate growing and fruitful trees therefore, the business of disbudding should be particularly attended to at this time. With regard, however, to shortening young shoots allowed to grow at this time, it may in some cases be practised to particular shoots in the latter end of this month, or in June; for instance, if there be any considerable vacant space either in young or old trees, we shorten one or more of the strongest of the neighbouring shoots situated in, or contiguous to, the place where the wood is wanted, shortening them to three or four eyes, and they will shoot out again the same season, probably a shoot from each remaining eye or bud, to furnish the vacancy more effectually. It cannot be too strongly impressed upon the mind of the practitioner that this is the season, more than any other, when it is mostly in his power to equalise the growth, and by timely direction give that symmetry to the tree which may be required or which is necessary. On every bearing shoot of peach and nectarine-trees, the leading and the lowest placed young shoots are to be preferred; next, all those which rise on naked parts of the branches; and should any of these appear to be too luxuriantly upright, turn them horizontally or downward, in order to check this luxuriance, and which, at the proper season, may be restored to their place and required direction. Some, as has been already observed, may be stopped to divide their strength, and multiply more moderate growths.

APPLES.—Now is the season when caterpillars commence their ravages, and hand-picking should be constantly attended to. When the fruit is completely set, give the whole a good syringing in the morning with soap-suds mixed with a little tobacco-water. The same kind of attention must now be paid to standards as to wall trees—the crops will amply compensate for the trouble bestowed upon them.

THIN APRICOTS, &c.—Apricots, peaches, and nectarines should now be thinned, where the young fruits are set too thick upon the trees. These trees in favourable seasons sometimes set superabundant crops of fruit, often in thick clusters, and considerably more in general than they can supply with full nourishment; so that, if the whole were retained, they would not have room to grow, and the greater part would be small, and not attain perfection. Therefore, when these fruits are produced too thick, let them now be reduced to a good, moderate, full crop on each tree, and the sooner this is done the better it will be for the trees, and also for the remaining fruit.

CHERRIES.—This is the proper season for giving a final thinning of the wood and fruit, according to the condition of the tree. The shoots that will bear it should now be fastened on. If the weather be dry and warm, syringing will be found highly beneficial to the trees, and let it be always done early in the morning.

CURRANTS.—The ground should be kept clean by hoeing. The currant is not so much infested with the caterpillar as the gooseberry, but should any appear, fumigation with tobacco, or the application of tobacco water, will be found highly beneficial to the trees.

FIGS.—The figs on the open walls in this country are seldom worth any attention, as they seldom ripen. The crop is generally so scanty that no thinning is required. But as the trees are in general the harbour of spiders and other vermin, a good syringing would be advisable before the leaves cover the wall.

GOOSEBERRIES.—The caterpillar now makes sad ravages with the gooseberry-trees, and too much attention cannot be paid to them. It is recommended by some eminent growers of this fruit, to sprinkle the bushes with white hellabore powder; but we consider the tobacco fumigation, or the sprinkling with tobacco water, to be far more efficacious. On the choice trees, where fine fruit is expected, a careful thinning of the small berries should be made, which will impart an additional growth to the larger ones.

PLUMS.—The young shoots and fruit of all kinds of plums should be now attended to, and in all cases it should be done gradually, and, as it were, by constant attention. It is too often the practice to neglect this operation for a time, and then to thin severely, which is highly injurious to the trees.

STRAWBERRIES.—The strawberry beds should now be hoed, and all runners cut away, unles they be required for young plants. If hops from the breweries can be obtained, the plants will derive great benefit from their application.

FOURTH WEEK IN MAY.

NEWLY PLANTED TREES.—Water must still be given in very dry weather to newly planted trees, and in particular to those that were planted late in the spring. Considerable advantage will be derived from continuing to keep out the parching heat, and drying winds from their roots, by having the surface of the ground round their stems well covered with new dung, which may from time to time be renewed.

ESTABLISHED APPLE, PEAR, PLUM, AND CHERRY TREES.—These trees will, by this time, have made strong shoots, both against walls and espalier, and should this have been neglected the previous part of this month, it must now be performed. Look over the trees carefully, in order to give the branches proper regulation. The trees must now be properly cleared of all unnecessary shoots. All luxuriant fore-right, or ill-growing shoots, must be taken off close, and likewise such as are produced in parts where they cannot be regularly trained in. All that are not absolutely wanted to produce a succession of wood, or to fill up vacant spaces, must be utterly cleared away.

STRAWBERRIES.—The strawberry beds must be duly supplied in dry weather with water, as the plants will now be in blossom, and the fruit setting and advancing in growth. Strawberries should now be protected from birds by means of nets. If planted in the common way, in open quarters of the garden, they may be guarded by spreading nets over the beds, supported from the ground by small sticks, about a foot or eighteen inches high, these to be broken off and replaced after each gathering. This is attended with some trouble, but it often happens that small birds will destroy the crops, unless some such means be taken for its preservation. In damp weather, look over the strawberry beds, and pick up the slugs, which will be otherwise very destructive to them. Net up such raspberries, currants, and gooseberries, as are planted on south walls for early crops, for they are more likely to be destroyed by birds than they otherwise would be, if plenty of ripe fruit were in other parts of the garden. This precaution will insure a supply of table fruit at an earlier season than that at which the principal crops come in.

WATERING WALL TREES.—Continue to operate with the garden engine on all kinds of wall fruit-trees, except such as are advancing to maturity, and apply the water with force for the destruction of insects, and for refreshing the trees. This operation should now be always performed in the evening, in order that the effects of the water may act for a longer time upon the trees. The unhealthy state of wall-trees may be as often traced to an insufficiency of water, as to one half of all the other evils to which they are subject.

Wall Trees.—Where wall-trees have not yet had their summer pruning, that very needful work should now be done, otherwise the fruit on such trees will not only be small and ill-grown, but retarded in attaining maturity, and of very inferior flavour. The neglect of summer pruning and nailing till this time is detrimental, in a very great degree, to wall and espalier trees; particularly to apricots, peaches, nectarines, and such trees as produce their fruit principally upon the one year old shoots. It also causes great perplexity to the pruner; to break through and regulate such a thicket and confusion of wood, requires treble the pains and labour, and causes it not to be executed with such accuracy as when the work is commenced early in the summer.

Vines.—The vines will now require the utmost care, for unless they be now properly attended to, it will be folly to expect at the proper season large and well-ripened grapes. No fruit tree requires more attendance during summer than the grape vine. Its straggling manner and rapidity of growth, its long, flexible shoots, its tendrils and lateral shoots, get so crowded and interwoven with each other, that it is a task of some difficulty to put them in order again, if once they be allowed to run into disorder. Stopping the fruitful shoots and laterals, pinching off tendrils, and nailing up the reserved branches in proper order, require, at least, one day in every five; and it is not till the summer growth is nearly over that the vine can be left to itself. A portion of the leaves may also be taken off; for the fruit only requires to be partially shaded, neither shut out from, nor fully exposed to, the rays of the sun.

Thinning Stone Fruit.—Go over again the apricots and peaches, and thin off a few more of the fruit, where too thick, reserving the final thinning, however, till the stoning be over. Some of the large kinds of plums may also now be thinned, if the trees be much shaded and the fruit hang in clusters.

Destroying Insects.—Continue assiduous to destroy every species of insect on their first appearance, particularly the red spider and green fly, which, if dry weather takes place, will be in great abundance. The garden engine and fumigation will keep both under.

Apricot and Peach Trees.—If the requisite regulation of summer pruning and training has not yet been done, it should now be no longer delayed. This work should now be gone into, and followed with the utmost diligence till the whole be completed, for were those trees suffered to remain long in the wild confused manner that they naturally grow at this season, it would not only prove detrimental in a great degree to the trees, but would also very much retard the growth and ripening of the fruit.

THE KITCHEN GARDEN.

FIRST WEEK IN MAY.

Artichokes, for a late crop, to succeed those of the old shoots, may be planted about the beginning of this month. Let them have plenty of water for a week or two, if the weather be dry. The heads of these will come in late in the season; and they will continue to produce till destroyed by the frost.

Asparagus will now be fit for gathering for use. Some persons adopt the erroneous custom of twisting or breaking off the shoots from the crown instead of cutting them with a knife, by which practice the roots become necessarily more or less injured. The best method is to scrape away an inch or two of the earth from the shoot intended to be cut, and slip the knife close down another inch or two, taking care not to wound the crown, nor cut any other shoot that may be rising near to the one which is intended to be cut. The heads most fit are those which are three, or, at most, four inches long above ground, which, by being cut as above directed, will be in the whole five or six inches in length. They are often cut shorter, and often much longer; but those which are open in the head are not so marketable as the close, firm ones. Towards the close of the season of cutting, be careful to leave two or three shoots to each stool or crown, in order to draw nourishment to it, or otherwise such stool will die out, by which the beds or lines will be left full of blanks, which, owing to carelessness in this respect, is frequently found to be the case. The rows of asparagus which were sown as directed in March will require to be thinned out about the beginning of the month. They should be thinned out in the first instance to four or five inches, and in a few weeks more to nine or ten. Choose a showery time for their thinnings, otherwise give a hearty watering immediately afterwards; if the season be very dry, these seedling rows and any that were planted in March, should have a good watering once in three or four days, till their roots be well established in the ground.

Beans.—Top the early crops of mazagans or Lisbons which will now be in flower. This diverts the growth into the pods just forming, and forwards them in a very considerable degree. The time for topping is just when the flowers in the lower part of the stalk begin to fade. The plant need not be much shortened; an inch or two taken off the top is enough. Topping is not necessary for any but the early crops, and that only in order to make them more early.

Beet.—At the beginning of the month, the most forward crops of beet will require to be thinned; they should not be thinned out all at once, but by degrees; thin, therefore, in the first instance two or three inches apart in the line, and in a few weeks afterwards to five or six; choosing a showery time, or otherwise settling the earth about the plants left by a hearty watering, previously hoeing the ground amongst them, and closing it well about the roots.

Brocoli, for a late crop, may now be sown. The plants sown in March for an early crop will be fit to plant out the beginning of the month. They should be planted in a free open spot of ground, which should be manured if the ground be poor; and should be subtrenched or deeply dug. Plant in line, two feet apart, and eighteen inches in line. In planting, be careful not to bury the heart of the plants. Give a copious watering, which repeat if the weather be dry, and as necessity shall direct.

Brussels Sprouts may be planted and sown as directed for brocoli.

Cabbage, for crops to come in late in autumn and in winter, may be sown the beginning of the month. The early dwarf and the early York are the best sorts. If a succession of cabbages be wanted, more may again be planted; and let those of the advancing crops that require it be cleared of weeds and be earthed up. The earliest cabbages will now be beginning to show the hearts; and by being tied carefully up with straws or matting or the like, the blanching of them may be very much forwarded. Whenever the hearts begin to feel a little hard, then is the time for tying up.

Capsicums for pickling may be sown about the first of the month, in a spot at the bottom of a south wall or hedge, and, in order to bring them forward, may be covered with a hand or bell-glass. A spot eighteen inches or two feet square, sown moderately thick, will give plants enough for a large family. Sow in rich, light earth, and cover a quarter of an inch in depth. They will be fit to transplant in June. Water frequently, and when they have come up, give them fresh air every day, shutting carefully down at night for fear of frost, as very little frost would prove fatal to them.

Cardoons may be sown about the beginning of the month. They should be sown where they are to remain. They like a deep, light earth, not over rich. The leaves are large, something like those of artichokes, and they require a deal of room. They are blanched in the manner of celery, and are used in soups and for stewing. Prepare trenches as for celery, either longways or across the ground, four feet from centre to centre, and just as deep and wide as a single spot will make them, laying the earth on each side. Then point a little compact manure into the bottom of the trench thus formed, and sow or drop the seeds thinly in a drill an inch deep, downright in the middle. When the plants have risen a few inches, they may be thinned out to four inches apart, and they are finally to be thinned out to eight or nine.

Carrots.—The early sown crop may be thinned out, if broadcast, to three inches square, and if in lines, to one or two in a line. As they come to be of use, draw them out regularly, and do not thin all at one place, as may too often be seen, finally thinning them out to five or six inches apart. Never thin carrots in dry weather, but always in a showery time; also give an immediate watering, to settle the earth about those left; for if the drought get down to their fibres and top root, they stint and canker in consequence. Weed or hoe after thinning and previously to watering, if that be necessary, thus closing the earth the better about the roots of the plant.

Cauliflowers, for a late crop and a last crop of the season, may be sown this month. Plant out more for a succession, if that be required. These may be planted on the north border, or other shaded places. Hoe and earth up crops formerly planted, as may be necessary. Cauliflowers, under hand-glasses, should now be fully exposed in the day, and also at night, if the weather be mild. As the putting on of the glasses is apt to bruise the leaves, some caution should be observed, as, otherwise, more harm is done than good. Go over the early crop, and if the flower be appearing in any of them, break over a leaf or two upon it, in order to shade it from too much wet; thus blanching and rendering them more delicate. This inspection should be frequently repeated both on the early and late crops, as by breaking down the leaves upon the flower, it is kept back from blowing considerably in hot weather, and at all times rendered more delicate by being shaded. In dry weather, water all the crops freely, forming a basin round the roots of the plants in order to retain the water.

(*Continued on page* 146.)

THE ANTIRRHINUM.—*See page* 158.

THE PETUNIA.—*See page* 154.

THE KITCHEN GARDEN.

CONTINUED.

Celery, for a late crop, may be sown the first of the month in an open situation. Also, at the beginning of the month, plant out of the February or March sowings a parcel into nursery-beds. This is done in order to strengthen them, and cause them to make fibrous roots previously to final transplantation. Choose a free spot of rich light earth, which divide into beds four feet broad, with alleys of a foot between them; this is supposing the beds to lie across a border, and to be cut short or otherwise; perhaps a single bed may be enough. Twenty or thirty square yards of earth will contain enough for an ordinary family, to be pricked out at a time, and observe that a quantity of every sowing should thus be pricked into nursery-beds, there to remain four or five weeks before being planted into the trenches for good. Point over the ground, and lightly roll or beat the bed smoothly with the back of the spade. Choose the stoutest of the plants on the seed bed; prune off the points of their top roots, pull away a few of their bottom leaves, and shorten the tops a little with a knife, then prick them in three inches square, observing not to plant so deep as to bury the heart leaves; give a moderate watering, which repeat according to necessity, and shade with mats from the sun for six or eight days. Some, in order to save the trouble of nursing the plants, sow all their celery crops thin, alleging that by having plenty of room, the plants get strength enough without being pricked out. But this is a gross mistake, as the plants bush too much in consequence, and after being planted out for good, are apt to run to seed. Now, if this happen with any after being pricked out as above directed, the trouble of putting useless plants into the trenches is saved, and, which is of greater importance, a regular crop then is obtained; for plants put in to supply vacancies never overtake or even keep pace with those first planted, and are thereby next to lost.

Cucumbers for pickling may be sown the beginning of his month at the bottom of a wall or hedge, in every respect as directed for capsicums. They will be fit to plant out by the end of June or first of July.

French Beans may be sown in the first and also in the last week of the month. Sow the same kinds as those mentioned in April.

Love-apples or Tomatoes for soups or stewing may be sown the beginning of the month. The plant is of the trailing kind, and requires support. Therefore, sow at the bottom of a wall or pale, to which it may be trained, and in a south aspect, as otherwise the fruit may not come to perfection. Any blank place on a fruit wall, the size of a square yard, will contain two or three plants. The seeds may be dropped in a line at the bottom, and may be thinned out to three or four plants, after they have come up a few inches. It will grow in almost any kind of soil, and need little other care than being trained to the wall or pale as it advances, and being pruned of all superfluous shoots as the fruit begins to colour, in order to be in the sun, the better to ripen them off.

Onions.—Let the early-sown of onions be now thinned out to five or six inches square, if broadcast; and to three or four for drills, at the same time clearing them from weeds, either with the hand or with a small hoe. It is best to thin in a showery time, otherwise it will be necessary to give a good watering; in order to settle the earth about those left; the younger crops may also be cleared of weeds, and thinned out to half the above-mentioned distances, thinning out finally when they are more advanced; for it is proper to do this work by degrees, lest the crops in any measure go off by severe drought, a circumstance by no means uncommon.

Now again go over the winter crop, and pick out the heart-buds of all that are shooting for seed; clear the ground amongst them of weeds, and then let the crop be laid over; that is, let the stems be bent flat down, just above the bulb. This may be done with the hand, but it is more expeditiously performed by two people with a rod, or rake handle, each taking an end, and walking slowly up the alleys, holding it so as to strike the stems an inch or two above the bulb. This *laying over* is very serviceable to all crops of onions, as thereby the growth of the stem is checked and thrown into the bulb; to late crops, in bad or wet seasons, it is particularly so, as by thus checking their growth, they are, in a measure, *forced* to ripen.

Parsnips that were sown in March will now require to be thinned; the same practice to be observed as with beet, and at the same time clear the crops from weeds. Parsnips may yet be successfully sown, but the sooner in the month the better.

Peas, for successional crops, may again be sown. Hoe, earth up, and stick the advancing crops, accordingly as they stand in need.

Potato.—Hoe the advancing crops, and draw a little earth to their stems, but always observe to keep their hearts clear.

Pumpkins, Gourds, and Vegetable-marrow.—Some plant these for show, and some make pies of them or eat them with steaks or chops. They may be raised in every respect as pickling cucumbers, only they require a considerable space of ground. They may be trained to a wall or pole, and in that they have a fine appearance when full in fruit.

Savoys.—The savoys sown in March will now be fit for planting out about the beginning of this month. Plant in all respects as directed for brocoli; a few may be sown in the course of this month to come in as late coleworts or spring greens.

Sea-kale may yet be either sown or planted, but the sooner in the month the better. In regard to blanching, follow the directions already given.

Turnips for successional crops may again be sown.

The early crops will now require to be thinned, but this should be done by degrees, and mostly as wanted for use. If the seeds have risen very thickly, however, the broadcast crops may be thinned out three or four inches square, and those drilled to two or three inches in line, afterwards to be respectively thinned out to nine or ten inches square, and to five or six inches in line, if it be intended they should grow to full size. Let them also be cleared from weeds, and observe to thin in a showery time, if possible.

Let the rising crops be cleared of weeds, if necessary, and let them and the new-sown ones be regularly watered in dry weather.

General Produce of the Kitchen Garden in May.—Asparagus, balm, beans, beets and borage, borecole, or kale brocoli, burnet, cabbage, carrots, cauliflowers, chervil, chives, coleworts, corn-salad, cress, endive, eschalots, fennel, garlic, horseradish, Jerusalem artichokes, leeks, lettuces, marjoram, mint, mustard, onions, parsley, parsnips, peas, potatoes, radishes, rocambole, sage, sea-kale, sorrel, spinach, sprouts of cabbage, tansy, thyme, turnips, turnip-tops, watercress.

On the Hot Beds.—Carrots, cucumbers, kidney beans, lettuces, melons, mushrooms, peas, potatoes.

THE SECOND WEEK IN MAY.

Beans (Planting and Hoeing).—Plant more garden beans for later crops, in July, August, and September. The Windsor, Toker, and Sandwich kinds will yet succeed tolerably well, and the long pods and white blossom beans is also very proper to plant any time this month. But where a succession of young beans are desired all the summer season, there should be some seed put into the ground at three different times this month, allowing ten or twelve days, or not exceeding a fortnight, between each planting; and at this season it will be of advantage to allow them a situation where the ground is moistest, if there be a choice of soil, planting them in rows a yard asunder. Hoe the ground between the rows of advancing young beans, cutting up all weeds, and draw earth about the stems of the plants.

Management of Beans in Blossom.—Now it will be proper to top such beans as are in bloom, in order to promote the free setting of the pods. This should, in the beginning or the middle of the month, be particularly practised to the early crops, provided it was not done last month. By this practice the pods will set sooner, and swell faster, and be better nourished, and come in almost a week sooner, than if the plants were permitted to run, for not having any advancing top to nourish, their whole effort goes to that of the fruit. But in regard to the small early beans, if you would have them come in as early as possible, they should be topped as soon as the blossoms at the bottom of the stalks begin to open.

Borecole. — Sow borecole, otherwise brown cole, for next autumn, winter, and spring use, if not done in March and April. This is a useful plant, is of the open cabbage tribe, and well worth raising in every kitchen garden for the service of a family.

Brocoli. — Brocoli seed, both of the purple and white kinds must be sown this month for the second principal crop, for use the following winter and spring. It would be advisable to sow a little of this seed at two different times this month, in order to have a proper supply; therefore, sow some seed of the above, and also the purple cape, green cape, Grange's early autumnal, and the green close-headed kinds, about the 20th or 24th. The plants raised from these sowings will produce their heads, probably some in December and January, and the others more generally in February, March and April. After the main heads are gathered, the stalks of the purple sort will yield abundance of excellent sprouts, but rarely any from the white or cauliflower brocoli. These seeds must be sown in a bed or border of rich earth, in an open exposure, each kind separate.

Cabbage and Savoys. — Transplant spring-sown cabbages and savoy plants for autumn and winter use, also red cabbages. These should be allotted an open situation, or some may be planted between rows of early cauliflowers, or wide rows of garden beans or French beans. But where there is ground to spare, it will be more advisable to allot these kinds of plants an open compartment by themselves. Draw earth about the stems of early cabbages and others; this will strengthen the plants greatly, and bring them forward in their growth.

Carrots (Clearing and Thinning).—Carrots wil now be advancing fast in their growth, and should be properly encouraged: clear them from weeds, and thin the plants out to due distance. Such crops of carrots, however, as are intended to be drawn gradually for the table while young, need not be thinned at first to more than four or five inches distance, or by gradually thinning out the larger for use, the rest will grow more and more even daily. But the main crops of carrots that are intended to grow to full size should be thinned from about six to seven or eight inches distance.

Carrots (Sowing).—Carrot seed may still be sown where required. The plants will come up soon, and they will be ready in young growth to draw for the table by the latter end of July or soon in August, and continue all the autumn in season.

Cauliflowers (Early).—The cauliflowers that were defended with hand-glasses all the winter and spring being now of advanced growth, should have the glasses wholly discontinued, if not done the end of last month. Transplant the young cauliflower plants raised this spring from seed.

Cauliflower Seed for a Michaelmas Crop.—Now sow some cauliflower seed: the plants that are raised from this sowing will come into use in October, and will be in perfection the greater part of November. This is what the London gardeners call Michaelmas cauliflowers.

Celeriac.—Now transplant celeriac to where it is to remain. Plant in rows, twenty inches apart, on the surface of the ground. When the roots have begun to swell, remove the earth from them all round, and cut off the side ones, and some of the strongest bottom leaves, after which replace the earth, and settle all down with a good watering. The bulbous root is used in soups and salads, for which purpose they should be preserved in sand during winter.

Celery (Sowing).—Sow celery for a principal latter crop in the first or second week of this month. Dig a bed of rich, light earth, and sow the seeds pretty thick, and rake them in lightly. In hot, sunny weather, it would prove beneficial to shade the bed every day, from ten till three o'clock, till the plants appear. Likewise, let the bed, in dry weather, be refreshed every other evening with a light watering. The plants from this sowing will be fit to plant out in July, August, and September, and to take up for the table from October to Christmas, and for a spring supply.

Celery (Prick out and Plant).—Prick out from the seed bed some of the celery plants sown in March. Dig for the purpose one or more beds of light rich earth, and rake them even; then draw out of the seedbed some of the best plants in a thinning manner, and prick them into the other beds, three to four or five inches distance; give directly a moderate watering, and repeat it occasionally till the plants get fresh roots. Plant out celery in trenches, of the earliest sowings of February and March.

Cardoons.—The cardoons which were sown in March or April should now be thinned where they have risen too thickly, that the plants may have room to grow and get strength by next month, when they should be planted where they are to remain to blanch.

Endive.—Sow endive for an early crop, principally some of the white, and a small portion of the green, and prepare early a constant succession. It will be advisable to sow some seed at two different times this month, and when the plants of each sowing are about three or four inches in growth, plant out some of the strongest a foot distance; but never depend upon the sowings of this month for a main standing crop, the plants being apt to run up soon to seed the same year.

Kidney Beans.—Now plant a full crop of kidney beans, to succeed those planted in April. Any of the dwarf kinds may be planted, but the most profitable for this plantation are the black-speckled dwarf, Battersea, and Caterbury white dwarfs, or a few duncoloured and large white.

Lettuce Seed (Sow).—Sow lettuce seed; this should be done at two or three different times this month, so that there may be a constant supply of these plants in successional order in the proper season. The white and green Cos lettuces; Egyption spotted Cos; Silesian, and imperial, are all proper kinds to sow now, or occasionally the grand admirable large white Dutch, and the brown Dutch, &c.; the most desirable may be chosen from the above list.

Lettuce (Transplanting). — In moist weather, transplant Cos lettuce and other kinds which were sown the two former months. Early Cos lettuces, now beginning to heart a little, may in some of the largest plants have the leaves tied up with a string of bass, which will forward their cabbaging and whitening in the heart, and render them more crisp and tender.

LOVE-APPLES.—Plant out love-apples from the hotbeds when raised about the middle or latter end of the month to produce fruit in autumn for pickling, soups, &c. These plants, being trailers, and very luxuriant and rambling in their growth, must be planted close to a wall, pales, or espaliers; and when they begin to branch out, must be trained and nailed to the wall or pales in the manner of a wall-tree, or may be trained to strong stakes. Observe, they must be planted against a south wall or other south fence, or in some sunny exposure, for if planted in the shade the fruit will not ripen; any wide vacant spaces between wall-trees would suit them well, and will produce ripe fruit in August or September. One stout plant in a place is sufficient; water them as soon as they are planted, and shade them from the sun till they have taken root, and a little shelter of hand-glasses, &c., on cold nights, for the first fortnight, would be very serviceable.

ONIONS.—The crops of onions should, towards the middle or latter end of this month, be perfectly well cleared from weeds; and the plants intended for the main crop of bulbers should be thinned in proper time to about three, four, or five inches distance; being careful to leave the strongest plants. This work may either be performed by hand, or with the small hoe; the latter is the quickest method, and by stirring the ground with the hoe, &c., it is of great service to the growth of the plants; having for this purpose a small one-hand hoe, about two inches broad, or, in want of this, an old table knife bent a little at the end, about an inch, by beating on a fire, which will answer the purpose very well for small or moderate crops, observing in the main crops, designed wholly for bulbing, to thin them regularly, to at least about three or four inches distance.

PARSLEY, SCORZONERA, SKIRRET, AND SALSIFY.—The young crops of large-rooted parsley, scorzonera, skirret, and salsify must now be carefully cleared from weeds, and the plants thinned and hoed about six or seven inches asunder.

PEAS (SOWING.)—Sow more peas; in order to have a regular supply, let some be sown at least twice in this month; but where constant supplies of young peas are wanted, three or four sowings will not be too often, and there will be the greater chance of success in the late sowing. The best sorts to sow now are the marrowfats, particularly the dwarf, green, imperial marrowfat; likewise any of the Hotspur kinds and Prussian peas, &c.; and those that are sown any time this month will yield tolerably good crops towards the latter end of July, and in August. Now hoe and let some earth be drawn up about the stems of the crops of peas which were sown in April, for this will strengthen the plants greatly. Continue also to place sticks to rows of peas, according to the growth of the different young crops, for the plants to climb upon in their natural order in an upright growth, which, where intended, should generally be done when they are about six or seven inches high.

RADISHES (SOW.)—Sow more radishes; the salmon kind is very proper for this sowing, but sow also some short tops, and small white and red turnip radish. Choose an open situation, sow the seed thin, and rake it in properly. It is proper to sow three different times this month, to continue a proper succession. The beds must be often watered in dry hot weather, both before and after the plants are come up.

SMALL SALADING.—Sow mustard, cress, radish, rape, and other small salad seeds, often.

SPINACH.—Spinach may still be sown, when required, in continual succession, sowing the round leaved sorts in an open situation.

TURNIPS.—Sow more turnips; they will be fit to draw for the table by the middle or latter end of July, be in excellent order by the beginning of August, and continue good for a long time.

THE THIRD WEEK IN MAY.

ARTICHOKES.—The globe artichoke may yet be planted from strong suckers; and the sooner it is done the more certain the success.

ASPARAGUS.—Let the beds be now carefully cleansed from weeds; in this, give a careful hand-weeding, or with a small hoe on a dry day, cut up all weeds clear within the surface. Few attempts at blanching the tops of asparagus in this country otherwise than by having an abundance of loose earth on the surface through which they spring; but we are informed by Lasteyric that points of cane are placed separately over each stalk in Spain; and Besumann of Vienna, in a communication to the Horticultural Society on the culture of asparagus in Austria, says, "To give asparagus shoots growing in the open air as much length and tenderness as possible, there is inserted over each stem, destined to be gathered as soon as it shoots above ground, a wooden tube, or pipe, eighteen inches high, and an inch in diameter. A practice has been adopted in this country of covering a part of the asparagus with rotten tan, which has been found to answer the purpose tolerably well.

BEANS.—Successional crops of beans may now be sown. Those most fit are the Windsor, Toker, or Sandwich. Clean and earth up such of the other crops as may stand in need. The benefit to be derived from earthing up has lately been much questioned; but on what grounds we cannot divine, except it be to affect singularity, and impart something new, although it may not be true. Our advice is to follow the good old custom,—earth up your plants, and their increased growth will declare the goodness of the practice.

BEET may still be transplanted; the soil is not required to be very rich. Now is the proper season to sow the main winter crop, for which we recommend the white Silesian beet. The plants should be ten inches apart, the rows eighteen inches distant.

BORECOLES.—Sow borecoles, of all sorts, for next autumn, winter, and spring use.

BROCOLI.—Such brocoli plants as are of a proper size should now be planted out, at the distance of two feet and a half or three feet. Let the ground be well prepared, by giving it a sufficient quantity of manure, and let it be deeply dug. In planting, take especial care not to bury the hearts of the plants. If the weather be dry, give a good watering, and repeat it occasionally till the plants have taken root.

BRUSSELS SPROUTS.—The directions for brocoli will apply to the sowing and planting of Brussels sprouts. The ground for them, however, should not be over manured, and they should be planted in the most exposed and open situation that is possible.

CABBAGE.—Earth up the early and general crops as they advance. The early crops will now be advancing to maturity, and may be forwarded in cabbaging, if the leaves be tied together with strings of matting, or willow twigs. Sow sugar-loaf cabbage seed, and any other quick-hearting kinds for summer and autumn coleworts, and young autumn cabbages.

CARROTS may still be sown with every prospect of success, particularly if the soil be strong and wet. It is by no means a bad practice to sow in April, May, and the beginning of June.

CAPSICUMS, raised last month in hot-beds, or otherwise, may now be planted out into a warm border. Protect them for a few days with small branches, for it is not till towards the middle of June that we are to consider such crops safe from occasional frosts. Capsicums grown in the open air are found to be less pungent than such as are grown more rapidly in hot-houses or frames.

CAULIFLOWER.—Towards the middle of the month cauliflower may be sown for a late crop, on a free, open spot of rich earth. The crop, for a winter supply, is to be raised from the sowing, and proper attention should be paid to give them a regular supply of water, according as the state of the weather may require it. If sown at this time, it will come into use during autumn, and with care will last till Christmas. Cauliflowers may now be planted out in a north border for a successional crop. They should not be exposed to the full power of the sun; the coldest and dampest situation in the garden will be the most useful for such crops at this season.

CELERY.—Prick out from the seed-bed a further supply of celery plants, as directed last week. Sow also successional crops. The plants, from sowings made this month, afford a supply for the principal late crops, and will be fit for the table from October till Spring. Supply the young plants abundantly with water, particularly in dry hot weather. A few of the early sown plants may be planted out in ridges or beds, to come in for use during the latter end of July and August. A few only should be planted at the time, as they are apt to run to seed. The trenches for celery should be ten inches deep, two feet wide, and six feet between. The latter space is convenient for lettuces, or any other light crop. Six inches of well-rotted manure should be put into the trenches, to be well dug in, and two rows of plants may be put into each trench, at ten inches apart.

ENDIVE.—Endive may now be sown for an early crop. The white and green curled are proper for this sowing, as well as the Batavian or broad leaved. It is rather singular that notwithstanding this is the sort most generally cultivated on the continent, and constitutes the principal ingredient in French salads, which are so much admired, it should be so little cultivated in England. We must, however, admit that it is on account of the greater warmth of climate, that all salads are so excellent on the continent, as no great degree of science is required in the cultivation of them.

KIDNEY BEANS.—Full crops of kidney beans may be planted at least twice this month. A successional crop of scarlet runners should be again planted, which will afford an abundant supply.

LEEKS.—Plant out leeks in rows fifteen inches apart, and twelve plants in each row. They require a soil well-manured. The plants should he raised up with a fork. When planted, the tops of the leaves and roots should be taken off, which greatly expedites the process of planting.

LETTUCE.—Continue to sow and plant all sorts of lettuce, that a constant succession may be produced. Give plenty of water to them in all stages of their growth. Tie up, to blanch those that are nearly full grown, which will improve them in delicacy of flavour.

LOVE-APPLES.—About the middle of the month, if the weather be favourable, plant out the love-apples reared in the hot-beds or otherwise. They must be planted where they are fully exposed to the sun. Their whole culture consists in keeping them moderately thin of branches, fastened to the wall, or other support, as they advance in growth, and in stopping each branch a few inches above where it has shown its fruit.

ONIONS.—The general crop of onions should, towards the middle of this month, be cleared of weeds. This operation should be performed with a narrow hoe, which will not only destroy the weeds, but by stirring up the surface, will contribute much to the growth of the crop. At the same time, thin them out to the distance of from three to four or five inches, according to the sorts.

PEAS.—In order to insure a regular supply, let some he sown at least twice this month. The hest sorts to sow at this time are Knight's tall marrow, dwarf green imperial marrowfat, blue Prussian, &c. Earth up and stake such early crops as require it. Stop the leading shoots or tops of the earliest crops when in blossom; this will accelerate the setting and maturity of the fruit, by diverting the strength of the shoots into the pods. This, however, would be an endless task upon a large scale, although it would be beneficial to all.

POTATOES.—The crops of potatoes, as they advance, should be earthed up and hoed. Potatoes may still he planted with success,

SAVOY.—Sow savoy seed for a latter crop; the true green savoy is the best sort to sow now, for it is the hardiest to stand the winter. This seed may be sown any time in tho month, and will come in very well for a late crop; but to have a good crop of full-hearted plants, let the seed, if possible, be sown in the second or third week in this month.

SEA-KALE.—The buds must now be thinned out to about three within a square of six inches, and watered with salted water, say two ounces to a gallon of water.

SPINACH (NEW ZEALAND).—This plant has been much recommended as a substitute for spinach, during the months of summer, when spinach is apt to run to seed before it attains a size sufficiently large to be useful. It is a delicate plant, and can only be brought to perfection, with any degree of certainty, by being raised under glass, or upon a bed of hot dung, protected with mats, or some other covering.

TURNIPS.—This is a favourable time for sowing turnips, and by the latter end of July they will he sufficiently large for the kitchen. The early crops of turnips should always have a warm aspect; the soil should be of the lightest and driest description, and moderately enriched with manure. The most successful time to sow the seed is in showery weather, or immediately after rain. The early crops will now require thinning, which ought always to he done with a small hoe, which not only cut up the superfluous plant much sooner than they can be removed by the hand, but also, at the same time, stirs the surface of the ground around them, which will be found to be of much advantage. The operation of thinning should be performed when the rough leaves are about an inch in breadth.

THE FOURTH WEEK IN MAY.

GENERAL INSTRUCTIONS.—If the weather in this month prove dry, the growth of many esculent plants will be considerably retarded, particularly the beans and peas, the blossoms of which fall off before arriving to maturity, and, consequently, are not succeeded by fruit. A certain degree of attention is, therefore, necessary to give a regular supply of water to the growing crops; at the same time it must be observed, that in promoting the growth of the crops, weeds are also encouraged, which at this season of the year are very abundant, and which, if not timely checked, weaken the young crops to such a degree, that they never afterwards recover their full strength. There is not any work in the kitchen garden which at this time requires greater attention than the eradication of weeds. Many will now begin to perfect their seeds, which being shed upon the ground, it will require several years to extirpate them, independently of the injury which is annually done to the crops by choking them in their growth, and exhausting the soil of that nutriment on which the strength and flavour of the vegetables depend. Every part of the culinary garden should now be kept in a neat and well-regulated condition, and constant attention paid to the progress of all seeds committed to the ground. Those that vegetate freely should be forwarded by hoeing, thinning, and watering, and in places where the seed has failed, it should be immediately resown. No time should be lost when such circumstances occur. Some crops, such as beets, onions, parsnips, and some others, may be restored by transplanting them from those places where they may have come up too thickly. The depredations of insects should be guarded against as much as possible, until the crops be rather advanced; for, after they have formed their rough or perfect leaves, few insects attack them, at least, not so as to endanger the crop. Covering the surface of the ground between the rows of crops with litter, moss, tiles, or slates, has a beneficial effect at a time of severe drought, and prevents the too rapid progress of evaporation. Frequent hoeing, to a considerable depth, has, to a certain extent, the same effect; and either method will lessen the labour and expense of watering. When recourse is had to watering, it should be applied as late in the afternoon as possible, or early in the morning, but never during the middle of the day, except when a regular system of irrigation can be effected, and even then water should not be allowed to come in contact either with the foliage or the stems of the plants. When the ground can be kept in a moist state, during the warm months of summer, the most luxuriant crops may be expected.

Asparagus, newly planted, should be watered with liquid manure and salted water; or, where the liquid manure cannot be obtained, pour some water over the manure, and water the plants with the drainings. Some gardeners perfer to thin out young plants when sown, but this practice should not be adopted unless the ground be thoroughly prepared. When the crops are taken from the established beds, the plants should be thinned according to their strength.

Beans.—The beans that are in flower should now be topped, in order to promote the free filling of the pods. This should be particularly attended to in the early crops, for it will not only make them swell faster, but will forward them into fruit, at least a week sooner. Observe to let the stems be first advanced to such a height as to have a sufficient number of pods; the early mazagan may be topped when about two feet high, and the larger sorts when from two feet and a half to three feet and a half high.

Borecole.—The different kinds of kale are included under the head borecole. They may be considered as the most hardy of vegetables, and, therefore, it is good practice to sow largely. Those that were sown last month should now be pricked out.

Brocoli.—Prick the plants out from the former sowing, and make another; put the best plants by themselves, at wider distances than the smaller ones.

Cabbages.—Plant out more at eighteen inches asunder, and sow some more seed. If any have been cut, clear them of their under leaves, and allow them to stand, in order to throw out a crop of sprouts. It they be thinned to one or two, they will make tolerable heads.

Capsicums.—The capsicums for pickling, which were sown and raised in a hotbed in March or April, should now be transplanted into the open ground. But as these plants are tender, and being raised in a hotbed, must not be planted out till settled warm weather.

Carrots.—For a late crop, in stiff soils, make holes with a dibble, fill with fine soils, and drop in the seed. Thin the main crop to eight inches distance; the other sowings may be left thicker.

Celery.—Prick out the plants into a very rich soil, and water and shade them for a few days; hoop them over, so as to facilitate covering from frost; when requisite, water slightly with liquid manure.

Endive.—Sow a little towards the end of the month, in a rich, open, and warm place.

Herbs.—Parsley seed may still be sown, as may also the seeds of most other pot-herbs, if not sown in March and April, but should be sown about the middle of this month. Sow now purslane seed where the plants are in request, either for ordinary uses or salads. Also chervil, borage, sorrel, burnet, fennel, dill, marigolds, nasturtiums, thyme, savory, hyssop, and marjoram, or any other aromatic or sweet herbs.

Kidney Beans.—Plant out those raised under glass about the middle of the month. The seeds may be put in at the same distance, namely, four inches in the row, and eighteen between; or, what is better, set the rows four feet apart, and plant cabbages between.

Leeks should still be planted out for a winter crop. The leek requires a rich soil, and the plants should be well watered.

Lettuce.—A few more may still be sown,

and prick out the plants occasionally a foot apart each way.

Onions.—Thin the main crops to four or five inches, and transplant a few in showery weather; clear the beds of all weeds.

Peas.—Sow about once a fortnight. Stake early, and according to their respective heights; top the tall growers frequently.

Radishes. — In those localities where there is a scantiness of ground, it is a good practice to drop in a few seeds amongst any of the other crops. The seed should be sown twice this month.

Sea-kale.—After the crop is taken, it should be cut over level, the ground forked, dressed, and salted between, but not over the flowers, and in no case must salt be scattered over any growing plants; and here it will be proper to caution every one to let no particles of salt fall on or close to box-edging; it is fatal beyond everything to this otherwise iron-hardy shrub.

Turnips.—This is a good season for putting in the main sowing. Thin the early ones to about eight inches.

Vegetable Marrow.—Plant out from the frames under hand-lights to remain for a time, and if they be planted in beds below which there is a little fermenting material, it is all the better.

PROPAGATION OF TULIPS FROM SEED.

For the Flower, Fruit, and Kitchen Garden.

To grow tulips from seed is the only way to produce new varieties, and that these varieties may have a fair chance of being good ones, a little trouble and much patience are necessary. Having been a cultivator from seed nearly twenty years, during which time I have been eminently successful, I would recommend all, particularly young growers, to adopt the following practice of sowing seed:—Select good varieties, and cross them by others equally good; it will be necessary, in the first place, to attend to the form, and in the second place to the marking of the flower. I would advise never to fertilise a flamed with a feathered flower, and *vice versa*, but endeavour to keep the varieties separate. The plan I have adopted has been to fix upon a flower for seeding from; this I envelope in a piece of muslin or fine net. The day on which it first expands, I remove all the anthers before they have burst to shed the pollen; on the following day I convey the anthers from another flower, and with it gently touch the T shaped process upon the top of the seed pod, and again tie it up to exclude bees or flies.

The seeds are to be sown in a mixture of loam and sand in pots; this may be done in the autumn, care being taken never to allow the earth to become dry. In February the seeds will spring up, and when the grass is dead, set the pots in a dry shed for the summer months; in the autumn bring them forth, and attend to them as before. When the grass dies a second time, take them up, and store them in a canvas bag; should any have made an offset, wrap it up with the parent bulb, so as to keep every variety with its increase separate.

The practice of seeding from breeders is very hazardous, for when the breeder breaks, it may be good for nothing, consequently nothing can be expected from its progeny.

To purchase breeders for breaking is most fallacious; it merely adds innumerable names for the same flower, and the only satisfaction that can arise from it is the vaunted boast of saying,—"I broke that flower," whereas it is broken in due course of nature. Your neighbour may have purchased some of the same stock, and be equally successful in breaking a flower; he may call his a king, and you may call yours a queen, still they are the same flower.

S. F. S.

Potato-haulm.—From a passage in Professor Playfair's Lectures, it seems that potato-haulm, containing nutrition both for the grass and the seed, should be a desirable ingredient in compost. I have some which was green about five years since, and has been a soil for a year and a half: it looks promising. I imagine there is a great difference in the strength of its fibre; some sorts appear to decay faster than others.

Russian Violets.—In order to have these flowers bloom the whole of the winter, some of the best plants should be planted in the month of August, in an old melon or cucumber bed; in the following months the lights may be put on; during the winter particular caution should be taken to guard against frost, but when the weather is fine and genial the glasses may be taken off. The best and most wholesome plants are generally obtained by taking off the runners in spring, then planting them in a nursery, and by the month of August they will have made considerable progress towards perfecting their bloom.

EVERGREENS.

THE LAURUSTINUS.

This, as an evergreen simply, has not so much as some subjects to recommend it, but when it is considered that the flower actually comes at the beginning of winter, and lasts until the winter has left us, it can hardly be too much valued; the foliage is always the most handsome when the plant is in flower, so that it can hardly be surpassed in usefulness in the planting of a shrubbery, or decorating any dressed ground. It is a handsome growing shrub, is obedient to the knife, for it bears pruning well at the right time, and is a most abundant bloomer. It grows to a considerable size as a shrub, and, therefore, though not planted in a forward situation on a border, it ought not to have anything before it, for amongst other pleasing qualities it feathers completely to the ground, and forms a fine cone of dark foliage, relieved with as much flower as leaf; small, therefore, as they may be planted, it is best to put them where they will not be disturbed, and have nothing too near. The spring is the best time for moving it, before it begins to grow, but in order to be quite safe, it is better to buy them already established in pots, as they may then be planted at any time in season.

PORTUGAL, AND COMMON LAUREL.

Both of these grow fast, but especially the latter, and the narrow-leaved varieties of it. The Portugal laurel does not move well when old. Young trees must be chosen, and allowance must be made for their growth. The common laurel is the more rapid grower of the two, not that it grows more in actual quantity, because three or four shoots take a lead off, and unless they be topped, to check them early, the rest of the shrub hardly moves at all, so that to make them grow handsome and bushy, the shoots should be stopped at a foot in length, and the lateral branches be thus encouraged; these may be calculated upon to form thick wood, and fill up spaces rapidly, and, of course, are, on that account, considered common in planting, and in fine work are used sparingly. Yet the Portugal laurel, with its dark bushy foliage, and the common laurel, with its shining bright green leaves, form an excellent contrast, and are well adapted to aid the proper diversity of large or small work. The Portugal laurel may be moved well from nurseries, where these awkward and miffy plants are constantly shifted, but if they have not been moved every two or three years, we should not like to trust them more than eighteen inches or two feet high. The common laurel is a free grower, and may be well moved three or four feet high, but plants bushy at the bottom should be chosen, and when once planted, should be kept in shape or trained to the form required.

THE CYPRESS, OR CEDAR.

This is an elegant tree, and the varieties for garden and shrubbery purposes are called by the nurserymen *Cupressus baciformis*, *C. sempervivens*, and *C. thyoides*. There are others, but those we have just mentioned are quite sufficient. The first and last are called also cedar of Goa, and white cedar. They are beautiful trees, and though not absolutely necessary, contribute much to diversify the foliage, which is the great feature to be aimed at. These are common nursery plants, and should be bought in pots. But the cedar of Lebanon, which does not come under this name, but *Cedrus Libani*, is a most beautiful plant, and where it has attained any age, it is a magnificent tree. These should be planted only where they have plenty of room, if we once admit that we are to be guided in our planting by the progress which trees are likely to make. We confess that although we might place a cedar or two where they should never be disturbed, we should use them in clumps, for which their future growth would in time unfit them, if it were only for the pleasure of their assistance whilst they were of a moderate size. We have no notion of depriving ourselves of a seven or fourteen years' acquaintance, merely because that acquaintance would in twenty-one years require to be got rid of; but no ground of any pretensions to beauty should be without a cedar or two, where they could be left to complete their growth, whether that took one century or three. Its dark green foliage, and fine pyramidal growth, fit it for any place; whilst it is in size congenial to the place, and we should have no idea of doing without them because they outgrow our use.

THE PETUNIA.

The genus petunia has a great affinity with *nicotiana*, and, in fact, the name petunia is derived from the Peruvian word *petun*, which signifies tobacco. It is supposed that the first variety of this flower, the *petunia acuminata*, came from Chili, about 1826, and it was followed, in 1829, by *petunia nyctagini flora*, or, as it was then called, *nicotiana nyctagini flora*, which was brought from South America. The latter is still generally cultivated, though the maintenance of it in good health is a task of greater difficulty than any other of the genus. Another variety, the *petunia violacea*, was brought from Buenos Ayres, in 1830; so indefinite were the distinguishing characters of this plant, that several florists were induced to include it in the new genus *nicremborgia*. It is, however, now generally known as a petunia. It is to the introduction of this species that we are indebted for the numerous seedling varieties which have appeared every year, the last being always surpassed by its successor in the beauty of its flowers.

The cultivation of the petunia is so extremely simple, and requires so little professional skill, that it is within the power of the humblest florist to grow it. If a few healthy plants be purchased in the spring, they may be increased to almost any extent, during the summer months, by placing cuttings under a small hand-glass, in a shaded border; and, as a window plant, there are few that require less care and attention. The varieties of the petunia, like most other flowers, are produced from seed, and to accomplish that desirable end, it is necessary that a spacious, well-ventilated cucumber pit, or greenhouse, be provided. The preference is generally given to the former, because the plants are naturally impatient of heat, and in the pot they may enjoy a larger proportion of it, independently of the constant enjoyment of a renewal of fresh air. A difficulty generally arises in obtaining sound, well-ripened seed, which is in a great measure to be ascribed to the inconstancy and variableness of our summer weather. The plants being the natives of a tropical climate require a succession of dry weather in which to mature the seed, and it is for this reason that, during the blooming season, a pit, or some other commodious place, is to be provided, in which the seeds can arrive at maturity.

Having obtained a number of strong, healthy plants, containing some of the best sorts, which are to be obtained at Mr. Ivery's, Rye-lane, Peckham, they should, about the beginning of April, be put into large pots, with any light, rich soil, such as a mixture of leaf mould, loam, and decayed hot-bed manure; and it would be advisablo that there should be a sufficiency of this mould in the pots to sustain the plants throughout the following summer, without being again shifted. The petnnia generally commences flowering about the beginning of May. It is not, however, from these flowers that the seed is to be depended upon, but from those which bloom in the month of June or July. At this period, the plants should be taken to the pots, in order the better to protect the flowers from occasional showers or other moisture. An abundant supply of water and air should be given to the plants in the pots, exposing them to the bright sunshine, until the roots have entirely filled the pots. After the seed is set, it will be only necessary to keep the head of the plant dry, in order that no moisture may lodge in the capsule, and thereby prove its destruction. As the pod of seed becomes ripe, it should be gathered and kept in the usual way until the season for sowing, which is generally the early part of March. The seed should be sown in a hotbed, usually employed at that period of the year for raising tender annuals; and as soon as the plants are large enough to handle, they should be potted singly into small pots, continuing them in the frame until they have attained a sufficient size to bear removal into the greenhouse. The best plants should be increased by cuttings, which take ready root at any time on sandy mould or a gentle bottom heat, and the remaining portion may be turned into the beds of the flower garden

CABBAGES. — Nothing is more common than making about two sowings do all that is required of this universally approved and useful vegetable, and they are kept stunted in the seed bed, or perhaps run to seed there, for the purpose of taking out plants whenever there is a place to fill up. Now it is our opinion that no vegetable is better worth the trouble of growing well than a cabbage, and for this purpose we recommend, as we practise, the sowing frequently, that the plants may be taken at their proper stages of growth for planting out to cabbage. By frequent sowing—that is to say, once a month during the growing season—and by pricking out into nursery beds as soon as the plant is large enough to handle, you can always contrive to keep plants that will answer the purpose of a short or a prolonged growth. The advantage may be felt another way; there is no complete failure—no quarter of the ground need be idle six weeks, because you are always ready to fill it with this excellent vegetable. As to the sorts, we are almost indifferent about them. We have planted for years only two sorts—the true early York, and the imperial; both are excellent, and, if taken in season, we do not know which is the better of the two.

THE MELON.

Probably there has been more written about the culture of the melon than upon any other single subject, and yet we find hardly two persons recommending the same plan, or following the same plan; nor is there much difficulty in producing fruit in great plenty, of good flavour and handsome appearance. Formerly, the melon used to be an article of great consumption. It was not uncommon to see a market gardener with three or four hundred lights of melons, producing week after week large numbers, and getting rid of them at good prices. Now, it is rare to see any quantity grown, and the foreign melons, chiefly Dutch, though unfit to eat, seem to usurp at the market the places of their betters, at a price that would scarcely pay an English grower for cutting them and taking them to market into London, even if they cost nothing to grow. The market gardener's mode of growing the melon is simple enough. The hotbed is made in the ordinary way—the plants are put out on a little hillock under the centre of each light; common loam is added, until it be ten or twelve inches thick, all over the bed; a little air, and occasional water, until the plant be fairly set off growing, and there ends their culture. As soon as there is fruit likely to swell, they put a bit of tile under to prevent the earth from discolouring it, which it always will on the under side if it lie on the bare earth. We have ourselves seen three hundred lights of melons treated in this rough way, and producing, upon an average, three fruit to each plant, coming in good season with very little trouble or attention, but merely giving air in the heat of the day, and closing and covering up with mats at night. There would be no immediate occasion to go to work so simply as this with a choice variety of melons, but it would be quite as unadvisable to set about it with any vast preparation; and as to the soil in which it is to grow, nothing that has yet been recommended beats a rich, strong loam, fully charged with decayed vegetable matter. The turfs cut to lay down for loams, if laid together and rotted, form the very best compost that can be used, taking growth and flavour into consideration. It is, however, requisite that such compost should be freed from grubs, wireworms, and all other vermin, which turfs are too frequently full of about the time the sward has rotted, as in almost all cases wireworms and grubs are amongst the roots themselves, and are removed with the turfs; decayed turfs are in almost all cases sandy enough, and rich enough, and require very rarely anything else. If, however, contrary to ordinary cases, the stuff may appear too adhesive, the best addition that can be made is road scrapings; but we have rarely seen rotted turfs that were not in every way adapted for the earthing of a melon bed. We are not going here to speak of new modes of heating, confident that nothing that we have seen or tasted at feasts have surpassed the productions of an ordinary dung bed. Whatever substitutes may be found in hot water pipes, tanks for bottom heat, open gutters for moisture, and what not, may be treated of in their several places. In the meantime we set out with the most choice variety of melon, and nothing but well prepared dung and a three-light box, with the loam formed of rotted turf for compost. It may, however, be well to observe that these rotted turfs may be considered half good loam and half vegetable mould, for the turf, as it is growing, forms more than half the bulk, and is by the time it is wanted pure vegetable mould.

By turning over hot stable-dung repeatedly during a fortnight or three weeks, so as to shake it well out and mix it together, putting this day the outside in, and the inside outwards, sprinkling it with water where it is heated too much, and well turning it about, the dung will become moderately warm all through, and in a fit state to form a proper hotbed. Pile this dung up neatly and in even layers into a square-sided heap, about a foot larger every way than the frame which is to go on, and about three feet six inches high; put on the frame and the glass in it, and thrust a long stick with a pole to it into the dung about half way down, far enough to reach the centre of the heap, and leave it there, because by withdrawing this at any time, and putting your hand to it, you can feel whether it be too hot or too cold, or about right; the stick being returned to the place will continue to be a test of the internal heat. Put three inches of loam all over the inside of the frame.

Sow the seed the first week in February in a large sixty-sized pot, in the soil we have mentioned. Put three seeds in a pot, and get them into cucumber frames already going on, or into the bed already described; only it should be observed that other beds should be provided for getting up the seedlings, because the bed prepared as directed should be ready just at the time the plants are ready to go out. As soon as the seedlings have two good rough leaves, change them into forty-eight-sized pots, the three plants as they are, without disturbing the balls of earth. Let them have water to refresh them, and occasional air, by raising the back of the lights. You may now pinch the tops off just close down to the second pair of rough leaves. If you have been obliged to use the first made bed for raising the seed, you must prepare one for the fruiting; but if you have been able to raise your seedlings in other frames, and you have so timed the preparation of a three-light box, after the manner we have directed, as to be just ready for the reception of the plants, a barrowful of the compost may be placed in a heap under each light, which in our three-light box will make three heaps. Into each of these heaps we propose to turn out one of the pots of plants. The cone thus formed in the middle of the light may remain a few hours, which will warm the mould through. The centre is then formed into a hole, so as to take the ball of earth entire with the three plants in it.

The pods of plants selected for the fruiting-bed should be those which have the shortest joints; that is, whose leaves, which come out at joints only, are nearest to one another, and any that have lateral branches shooting out are to be preferred to those which have not. Turn the pot wrong side upwards, and knock the edge of it against the frame, when the ball will leave entire. This ball is to be placed in the centre of a heap, so that the bottom of the ball may be resting on the original level loam three inches from the dung; the heap of mould may form a ridge round the ball of earth, heaped close up against it all round, and making a kind of basin, into which some water of the same temperature as the inside of the frame should be put to settle the earth about the roots;

this repeated to the other two heaps, and it is complete. Air must now be given in the middle of the day by lifting the light a little behind. As the roots come through the sides of the heap of mould, others must be heaped round that for the roots to run into, and at length the mould may be levelled all over the frame to a good foot deep. A glass should be kept in the bed, to enable you to look at the temperature, which should never be allowed to get below sixty-five, and as the fruit is swelling and approaching ripeness, not less than seventy-five degrees; but more will not injure them.

Independently of sowing in March, or later, and thus working for later or successive crops, a second crop may be promoted by cutting back to a strong joint any vine that has done its work, so that you keep up by constant linings the proper heat of the bed; new lateral shoots will be made, and a new season of bearing commenced, sometimes as prolific as the first. The power of the sun does much towards this second crop, but the heat of the bed must be preserved by linings, or the fruit will not be matured. Vine after vine of those which have given early fruit may be cut back, until the whole are thus prepared for the second or late crop. Fresh compost may be spread three inches thick all over the bed, and the other soil mixed with it, as it can be forked together without disturbing the roots, good refreshing waterings with water heated to seventy or eighty, and then close up the frame a few hours, will be all that is required, except that very little air need be given, and that little at the back, until you see the vines making their new lateral shoots. They may then be treated as new vines, the heat kept up as much as possible by linings or otherwise, air given occasionally, and all the sun; the same pains taken with the fruit, and even greater restriction as to the number each vine is to bear; the fruit will perhaps not be so large, but it will be as finely flavoured if the same care be taken about heat and cold, and restriction as to water, except when the plants require it to prevent their drooping.

THE ANTIRRHINUM.

The value of such plants as antirrhinums in a gardening view, is easily conceived and universally acknowledged; they are ornaments suitable for almost every situation out of doors; the beds of the flower garden, the borders of the shrubbery, vases, rockwork, ruins, or even old walls may be made verdant at all times, and truly beautiful through the autumnal months; nor are they more particular in the choice of soil than of situation, only requiring that it may not be excessively wet, and their management may be entrusted to the merest tyro with a certainty of success. There are a few of the choicer sorts that from very high breeding have engendered a somewhat delicate constitution; these require to be planted in a drier soil, and to be protected from excessive cold and moisture through the winter; otherwise, the majority are sufficiently robust to withstand uninjured the severest weather. They may be multiplied indefinitely by cuttings taken from the parent plant in the beginning of autumn, choosing for the purpose shoots of a medium size; these, after trimming in the usual manner, should be planted under a hand-glass, and in three weeks they will have rooted sufficiently strong to be potted. For the first winter it will be well to preserve them in a common frame, or some may possibly be injured by frost, so as to spoil their blooming; and then in spring, about the middle of March, they should be planted into the places they are intended to occupy when flowering; here they soon attain strength, and in August, September, and October, will make a display amply rewarding the little trouble occasioned. Established plants may remain three or four consecutive years in the same situations, or indeed until they become too large, with no further care than cutting off the old flower stems, and spreading a little mulch about the roots when the borders are dug.

Seed offers another easy mode of increasing their numbers, and when pains are taken to intermingle the pollen of various sorts, is highly interesting, from the production of new varieties. It should be sown in March, in light rich earth, and with the benefit of a slight bottom heat, such as is afforded by a gentle hotbed, the plants soon make their appearance, when after a week or two of nursing, they may be inured to the air, and as soon as they are large enough, be removed to their appointed stations. No further care is necessary, except an occasional watering, or the aid of a stick, as may be found requisite; they will produce flowers in September of the same year, and have an advantage over cuttings, as they do not require protection; in short, antirrhinums are anybody's flowers who will give them room to grow.

MR. HOARE ON THE MANAGEMENT OF THE VINE IN THE OPEN AIR.

The vine is the usual ornament of the cottage, as well as the suburban retreat of the placeman or the retired tradesman. But a smile comes over the countenance of the adept in the art of training the vine, when he casts his eyes upon the erroneous system generally adopted by the majority of individuals in the management of their vines; acting upon no fixed or scientific principles, cutting out young wood when they ought to have cut out the old, and then wondering at the paucity of the fruit which the tree produces. It is a very common notion, says Mr. Hoare, but it is a very erroneous one, and one that has, no doubt, arisen from the universally defective method of pruning and managing that plant, whereby the wood is suffered, and, indeed, encouraged, to extend itself most disproportionately beyond the capability of its fruit-bearing power. I scarcely ever allot more than forty or fifty square feet of surface for one vine, and unless the soil and situation be very superior, indeed, a single vine will require a space of time not less than twenty years, at least, before it will possess a sufficient degree of strength to enable it to mature, annually, a greater quantity of grapes than can be trained on the last mentioned extent of surface. The general practice adopted with the vine is in accordance with the erroneous notion, that the more wood there is in a vine, the more grapes it will produce, or that one will be in proportion to the other. It happens, however, that the fact is precisely the reverse. If a vine be suffered to make a large quantity of wood, it will bear but little fruit; if it produces good crops of fruit, it will make but little wood; the one checks the other. To permit, therefore a vine to make a great quantity of wood, under the idea of getting there by a great quantity of grapes, is completely grasping at the shadow and losing the substance.

Mr. Hoare generally prunes his vines in winter, leaving on each vine no greater number of buds than appears, on an average calculation, to be sufficient to produce as much fruit as the vine is allowed to mature. Vines thus pruned, he says, with the bearing wood annually adjusted to their respective powers of maturation, being kept within a small compass on the surface of the wall, are easily managed throughout the summer. They never fail to produce an abundant supply of the finest description of bearing shoots within a reasonable distance of their stems, and always bring their fruit to the highest degree of perfection which the climate will permit, with a certainty which has never yet attended the production of grapes on the open walls in the country. With respect to the number of buds that are necessary to be left at the autumnal pruning to produce any given weight of fruit, it has been found to be a good general rule, and applicable to all those sorts of grapes usually cultivated on the open wall, to consider every bud, rejecting the two bottom ones on each shoot, as equal to the production of half a pound weight of fruit; that is, if a stem of a vine measure four inches in girth, its capability is equal to the maturation of twenty-five pounds' weight of grapes, and, therefore, the number of buds to remain after pruning will be fifty. This proportion would in general be too great, even in the strongest bearing sorts; but as accidents frequently happen to the branches during their early growth, and as there will, in general, be some buds that will not burst, provision must be made against these casualties, by reserving a greater number of buds than would otherwise be required. The proportional number, therefore, above-mentioned, will be found to answer well, and be sufficient to meet all contingencies.

Mr. Hoare is an advocate for the system of long pruning, in contradistinction to short, or spur pruning, and, in fact, he does not see anything very wonderful in the pruning of a vine, notwithstanding all the elaborate directions given on the subject from an early date to the present period. In order, however, he says, to render this art as clear as possible, the reasons on which it is founded require to be distinctly shown. For this purpose it is necessary to make an important preliminary observation, namely, that the old wood of a vine, or that which has previously borne fruit, is not only of no further use at any subsequent period, but is a positive injury to the fertility of the plant. The truth of this remark depends on the fact that every branch of a vine that does not produce any foliage, appropriates for its own support a portion of the juices of the plant that are generated by those branches that do produce foliage. In order to prove this point, and to make it as clear as possible, it may be necessary to describe briefly, and in part, the process by which the life of a vine is sustained, and its parts annually nourished.

The first movement of the sap in the

spring takes place in the branches, and lastly in the roots. The buds, in consequence of the increasing temperature of the air, first swell and attract the sap in their vicinity. This fluid having lain dormant, or nearly so, through the preceding winter, becomes gradually expanded by the influences of the solar rays, and supplies the buds with nourishment from the parts immediately below them. The vessels which yield the supply becoming, in consequence, exhausted, are quickly filled with fluids from the parts below them, and in this manner the motion continues until it reaches the roots, the ground reservoir of the sap, by which time the solar heat having penetrated the soil, the roots begin to feel its enlivening influence. The whole body of sap then begins to move upwards, and as soon as the quantity propelled is more than sufficient to distend all the vessels in the stems and the branches, the buds begin to elongate and extend. From this time, the fluid becoming more expanded every hour, its ascent is simultaneously increased in force and velocity; the vessels in the branches being filled to repletion, the buds quickly open, and shoots and leaves rapidly protrude.

The leaves attract the sap as soon as it reaches their vicinity, and, by one of the most wonderful processes that can be conceived, the result of exquisite organization, elaborate and prepare it, and render it fit for the nourishment of all the parts of the plants. The sap, after being thus prepared, is called *proper juice* of the plant. It then returns downwards, betwixt the bark and the alburnum, and in its descent is distributed laterally to every part of the plant, until it finally reaches the roots; during its descent a considerable portion of it is expended in the formation of a concentric layer of woody substance, betwixt the bark and the wood on every branch and also on the stem, which layer becomes the new alburnum.

Now, it is of importance to remember that every branch annually requires this new concentric layer, that this layer is formed from the proper juice prepared in the leaves, and that the thickness or thinness of this layer depends on the proportion which the quantity of proper juice, so prepared, bears to the number, length, and size of the branches which it has in its descent to cover and feed.

If, therefore, the foliage of a vine be strong and vigorous in its growth, and there is not any naked branches between the shoots which produce the foliage and the stem, then the proper juice in its descent will deposit on the stem a thick layer, and will also descend into the roots in great quantity. But if there be a great number of naked branches, which the proper juice in its descent has to clothe and nourish, then, having to spread itself over a much greater surface, the new layer will be comparatively a thin one, and the surplus left to enter the roots proportionably lessened in quantity. And, further, if the foliage be weak, and the vine contain many naked branches, then the quantity of proper juice prepared in the leaves will be so small in proportion to the demands which in its descent will be made upon it, that a new layer will, with difficulty, be formed at all, while a very small portion of the proper juice will be left to descend into the root.

From the foregoing, therefore, it appears that every naked branch of a vine, or one that does not directly produce foliage, diminishes the capacity of the plant for the production of young bearing shoots, inasmuch as it does not contribute anything to the growth of the vine, but, on the contrary, requires to be fed annually with a certain portion of the elaborated juice of the plant, which would otherwise be expended on the enlargement of the diameter of its stem, and thereby the increase of its capacity to make fruit, and the extention and multiplication of its roots.

Wireworm.—To destroy this pest most effectually.—Towards the end of last year, when my carnations and other plants had all been removed from my flower-beds, and previous to the latter being turned up for exposure to the winter frosts, I took sulphuric acid, in the proportion of one gallon to twenty of water, and applied the mixture plentifully to the soil. In two days I again repeated the operation, having previously turned up the soil, and seen that it had been well pulverized. After the lapse of ten or fourteen days I gave a plentiful application of powdered lime, and shortly after turned the soil up in ridges as usual. The result has been, that it is now a rare thing to see a wireworm, where previously I had often killed a hundred in half-an-hour, and where my plants where eaten up in a wholesale manner. Let any one collect a number of these most destructive pests, and put them among soil, in a box, and then apply the above mixture. Let him look for them next morning and communicate the result; or, indeed, in half an hour after. This can be used on a large scale as well as on the small flower-beds.

JUNE.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN JUNE.

TRANSPLANTING HARDY AND HALF-HARDY ANNUALS.—All sorts of hardy annuals may now be planted out in the flower garden borders, taking advantage of cloudy or showery days. All sorts of half hardy annuals and many tender annuals, may now also be planted out. The half hardy ones from the beds, pots, or boxes in which they were sown, and the more tender from the pots in which they have been potted, and have hitherto been growing. As soon as planted out, they should be watered, and shaded until they have struck fresh root into their borders, after which they will only require to be supported with sticks for the season. Annuals of considerable size may be safely transplanted, either where they have come up too thickly, or where it is necessary from other causes to remove them to fill situations in want of them, or to pot for particular purposes. In removing them, let them be taken up with as good balls as possible, and if not done in showery weather, let them be well shaded and watered. All patches of hardy annuals, which may have come up too thick, if they be not wanted for transplanting, let them be thinned out so that each plant may have room to grow to its full size. Most kinds of hardy annuals may still be sown, to come into flower in autumn.

CARE OF NEWLY PLANTED SHRUBS AND ORNAMENTAL TREES.—All newly planted shrubs and ornamental trees should be frequently and liberally supplied with water, both at their roots, and also over their heads, with the garden engine. The ground round their roots should be mulched with long littery dung, straw, or such like matter, to prevent the drought from penetrating to the roots. Those which are of large size, and are liable to be blown about by the wind, should be frequently gone over, and the ground regulated round their stems, and all such as require it should be supported with stakes.

TENDER ANNUALS.—The tender annuals, now nearly full grown, should be removed from the frames in which they have hitherto been growing, and placed in the greenhouse, which will be by this time cleared of most of the plants usually there, and which may be rendered gay all the summer, by being kept filled with annuals. There, also, they will increase in size, and be at all times ready to be removed into the drawing-room, or wherever they may be wanted; or they may be placed in the open air, or situations perfectly sheltered both from high winds and heavy rains. Such as are still in frames, and intended to succeed those now in flower, should be allowed plenty of air during the day, and also an abundant supply of water at their roots once every day at least.

ROSES.—Roses will at this time be probably much infested with the green fly, or aphis, which should be destroyed by tobacco water. Great care, however, should be taken in using it, or the tobacco water will disfigure the plants more than ever the aphis itself. Half a pound of the best shag tobacco should be put into a gallon of hot water, and the decoction suffered to stand till it be quite cold. The infected shoots should then be dipped in the tobacco water, and suffered to remain in it a few seconds, and then immediately washed in clean water. The aphides are thus removed with very little trouble, and the tender shoot remains so completely uninjured, that it generally expands its flowers, whilst the buds or shoots not dipped in tobacco water almost always either drop off or become deformed.

PROPAGATING FLOWER GARDEN PLANTS BY CUTTINGS.—Such herbaceous plants as are either rare or valuable, or of such as it is desirable to have a great stock, may be now successfully propagated by cuttings of the lateral shoots of their stems, planted in fine sand, either in pots, boxes, or in a border prepared for the purpose, over which should be placed hand or bell glasses, for the exclusion of air, until such time as they have begun to make root, when the glasses should be removed gradually. During the time the cuttings are without roots, they should be shaded daily, and watered sparingly; when of sufficient strength, they should be transplanted into nursery beds, or potted into small pots, in which they are to stand all the winter.

Taking up Bulbs.—As the bulbous rooted plants, such as tulips, hyacinths, polyanthuses, narcissuses, anemones, ranunculuses, have finished flowering, they should be taken up, and when dried, placed in the root room, or in some dry airy house, each sort kept separate until the season for planting arrives. Dry days should be selected for taking them up; and when that is done, they should be laid thinly upon mats to dry, in a shady situation, in order that the process of drying may go on slowly and gradually. When they are perfectly dry, they should be well cleaned; all the large roots separated from the small ones, or offsets, and each sort carefully labelled.

Taking up Jonquils, Crocuses, Snowdrops, &c.—Jonquils should not be taken up every season, like other bulbs, as they are found not to flower so well the first season after planting; their removal should only be considered necessary once in two, three, or four years, and that chiefly for separating the bulbs, which will by this time become more numerous, and if not separated would destroy one another. Some gardeners carry this system of taking up their bulbs to the extreme, and even take up crocuses, snowdrops, irises, crown imperials, and common narcissuses annually, whilst others, and by far the best cultivators, only take them up once in two or three years, in order to throw out clustered roots, or for the purpose of propagation.

Alpine Plants in Pots.—Alpine plants in pots will require to be plentifully supplied with water, mornings and evenings, before the sun shines upon them, and after it has set; not that they require such abundant supplies, but repeated waterings will cool the atmosphere around them, which at this season is too warm for many of them, particularly those that are natives of northern latitudes. They will also require to be often gone over; all weeds picked out of the pots; as they appear, and a watchful eye kept that they be not destroyed by slugs or worms. Those which are annuals should be attended to, when their seeds ripen, and immediately sown, as many of the more rare specimens are apt to go after flowering, and it is, therefore, necessary that they be propagated either by saving their seeds, or by cuttings, or by dividing at the roots.

SECOND WEEK IN JUNE.

Auriculas must be kept watered, the surface of the soil in the pots occasionally moved, and all decayed leaves picked off as soon as observed.

Carnations.—Pipe some of the best varieties; the small side cuttings, with two or three joints are best; they will make much stronger plants than layers. It is now a good time to top-dress those in beds, and those in pots more particularly, with sheep, or half-rotted cow or horse manure, to the depth of two or three inches. This will protect the roots from the power of the sun, keep the surface of the soil from getting close, and, the water passing through the manure, afford extra nourishment to the plants.

Ranunculuses must be well supplied with water, and carefully shaded during the heat of the day. If the weather should prove very hot, sprinkling the paths round the beds will much assist them, if done in the morning and middle of the day.

Dahlias.—Tie them to the stakes as often as you find they will reach; if not thus protected, the wind may break them off, and seriously injure them for the remainder of the season.

Pinks.—Those intended for seeding must be closely attended to. The following sorts may be depended upon for producing superior new varieties (if crossed, as recommended, with the auriculas, in a former number of this work), viz., Holmes' Coronation, Unsworth's Omega, Wilmer's Queen, Hodge's Melona, and Hodges' General Tom Thumb. The pollen, or male dust, will keep a considerable time, and, therefore, may be collected and preserved till an opportunity offers for applying it. Your beds must now be kept wet, particularly in light sandy soils. Attend to the tying of the pods of those intended for prize exhibitions, and particularly as to the shading during midday. The main stock of pipings should now be taken; the method of preparing the beds for the purpose, as also that of preparing the pipings, has been given in a former number.

Lifting Bulbs.—In all cases select dry weather for this operation. Dry the bulbs gradually in a shed, or loft, into which a free circulation of air can be introduced, often turning them over, and spreading them thinly, to prevent their moulding. Likewise separate the offsets from them; rub off the fibres, and the husky outer coat or skin, and when quite dry, and past taking further harm, pack them in boxes, baskets, or hampers, each sort by themselves, and store them in a dry airy place, till October, when they should again be planted.

ANEMONES.—Those that were planted in February should now have a copious supply of water, and sheltered from the mid-day sun; those that have done flowering should be taken up as soon as the foliage turns yellow, and dried in the shade, and then laid up in boxes or baskets until the planting season.

PLANTING SEEDLING FLOWERS.—This is the proper season for transplanting the seedling annual and perennial flowers, either in patches, or into beds by themselves. Likewise, thin out the patches of annuals, sown where they are to flower, if still too thick; and stick, or otherwise support, the flower stalks of all that may require it; repeating the necessary waterings, hoeing and raking the borders and walks as may be requisite. The stocks, rockets, wallflowers, &c., intended for the house, should now be planted from the seed beds, into pots of four inches diameter, filled with rich lightish earth. Immediately water them, and place them in the shade for a few days till they have taken fresh root, then plunge them into the ground, in an open situation, and water them occasionally as they may require. They will be fit to be shifted into full sized pots in August, and will get well established before winter.

CALCEOLARIAS may now be planted out with safety; the shrubby sorts look well either in masses or as single specimens. The seedling and old plants of the herbaceous kinds are best in beds, and all are the better for a little heat. If they be at all infested with insects, it will be well to fumigate them before being put out.

SUPPORTING AND TRAINING PLANTS.—Support and train all plants that require it, which will give a degree of regularity, order, and neatness, to the flower garden. Prune those that require it of all straggling shoots, or such as may have been injured, and thin those which are too thick of branches. Cut down all dead or decaying shoots of such plants as may be past flowering; and if the border appear too thin in any part, let the plants be brought, to make up the deficiency, from the reserve garden, in which there should always be a stock of plants and shrubs of great variety in plts, tubs or boxes—ready upon all occasions to make up deficiencies, or indeed occasionally to give quite a new feature to the flower garden.

COLCHICUMS.—It is now the proper season for lifting colchicums and dividing the bulbs. It is not a plant that bears moving well, and should, therefore, be planted again immediately.

DRESSING THE FLOWER GARDEN.—The borders of the flower garden must be carefully attended to, and no weeds allowed to make their appearance. They ought to be frequently hoed and raked, whether there be weeds in them or not, in order to bestow upon them an air of cheerfulness and neatness. The oftener this operation is carried into effect, the less trouble will be given. All decaying branches or plants should be removed, and the plants regulated and tied up before the borders are finished. The grass should be kept well mown and rolled, and no litter allowed to be seen within the boundary of the garden. The gravel walks should be regularly picked, hoed, and rolled.

CROCUS.—When the leaves appear to wither, it is time to take them up; attend to drying them before cleaning and storing them. The autumnal kinds may now be increased by lifting, but none are any the better for being often moved; plant them again at once.

PRUNING ROSES.—Many of the more delicate and fine French roses are apt to die at the points of the shoots when pruned in winter or early spring. To remedy this evil, a second pruning of the tender shoots should now be performed, or when the flowers fade. In the same manner as in winter pruning, all dead and decayed wood should be cut out, and those shoots that have done flowering should be shortened back to a healthy strong bud; but those shoots the buds of which have not yet flowered, may be left unshortened till the end of September or the beginning of October. Some prune all their best roses at this time, and their common sorts in winter in the usual way.

FUCHSIA.—Fuchsias will now be advancing to perfection, and require to be neatly staked, and very regularly supplied with water, or they will quickly lose their flowers. Shade those in bloom from the most powerful rays of the sun.

PANSIES.—Continue to propagate those. When a bed of them has nearly passed its best, the plants will be cut close over, and have a top-dressing of fresh soil, when they will flower again beautifully in autumn. Shade those in good condition, and water all over freely in the evening.

SUCKERS FROM SHRUBS.—Many flowering

shrubs now put out strong suckers from the roots, such as lilacs, syringas, and some of the kinds of roses which take grealty from the strength of the mother plant, and which, if not wanted for the purpose of planting next season, should be twisted off, or otherwise destroyed.

Training Climbing Shrubs.—Climbing plants, such as honeysuckles, the Ayrshire rose, trumpet flower, &c., and all shrubs trained against old walls, outhouses, or in any other way, such as different species of clematis, common passion flower, pyracantha, jessamines, gum cistus, green, variegated, and five-leaved ivy, or the like, should be carefully supported, and be trained as they advance in growth.

Primulas.—Shift into larger pots if requisite, and keep them from the bright sunshine, giving them plenty of air and moisture, night and morning.

Begonias, as they advance towards flowering, should be shaded from the hottest sun, and regularly supplied with water.

THIRD WEEK IN JUNE.

The flower garden requires at this season a great deal of attention and labour to keep it in proper order. The walks, edgings, hedges, if there be any, decayed flowers, and irregular growths of shrubs, &c., all demand the application of scythe, shears, and pruning-knife. No seeds should be sown, and every vacancy caused by the decay of early flowers must be filled up by such plants as come into flower in autumn. In order to keep a flower garden as attractive as it may be in all seasons, requires much forethought and consideration, in order to maintain a succession of interesting objects in every part.

Auriculas, Carnations, Picotees, and Dahlias will require the same attention as recommended in the operations for last week.

Pinks.—Continue tying the pods as before directed of those intended for exhibition, to follow for the late shows; keep the plants properly watered, and the blooms carefully shaded, &c.; take pipings of the scarce and valuable sorts as often as you find any fit to cut.

Ranunculus.—Pay great attention to the shading during the middle of the day, if the sun be out full. Keep the beds plentifully supplied with water, and if the weather prove very hot, water the paths round the beds also, particularly those on the windward side; it not only prevents dust, but supplies the plants with a moist and refreshing atmosphere, which tends much to enlarge the blossom.

Coxcombs, Tricolours, and other Curious Annual Plants.—Bring out now the annuals, which have been kept till this time in growing frames or in glass cases, to be placed where they are intended to flower, whether in the greenhouse or other stages, conversatory, or open borders. Where there are any kind of annuals still remaining in the nursery beds, &c., they should now be taken up with as much earth as you can about the roots, and planted on the borders or places allotted for them to blow. Let every plant, as soon as planted, be watered, and such has have long stems supported with stakes.

Lifting Choice Bulbs.—If any of the choice bulbous flower roots be yet in the ground, and if it be intended to lift them, that work should not now be delayed. Now, also, take up the roots of anemones and ranunculuses that have done flowering, and whose leaves have begun to decay, carefully drying and storing them, till the planting season returns.

General Care of Border Flowers.—Still be careful of all kinds of border flowers, whether in respect to watering those lately transplanted, or to supporting and training such as require it, cleaning and trimming the borders and walks, and destroying weeds whenever they appear.

Annuals.—As the tender annuals advance into flower, remove them to the greenhouse or conservatory, and shift such others as require it, giving them plenty of room and air as they expand. Sow the latter end of the month, so as to maintain a supply through the season, and pot off those sown last month, keeping them close and shaded for a few days until they root again, and then admit air and light gradually.

Half-hardy Plants, Verbenas, &c., will be chiefly removed by this time, except new ones, which it may be advisable to grow freely for specimens, or to supply cuttings; keep such plants shifted as they advance in growth; pick off all the blossoms from the latter, and take off the cuttings as soon as they are of sufficient size; insert the cuttings thinly in very sandy soil, under bell glasses, and plunge them in a gentle bottom heat; keep them shaded and moist, and in a fortnight they will be fit to pot off, and also to top for a fresh supply of cuttings. Attend regularly to the watering of all plants in the frames, and guard catefully against the increase of green-fly, or other vermin.

Plants in Frames.—All plants which have been brought forward in frames require regular attention during the heat of the summer, that they do not suffer for want of water; plunge those lately done with, such as roses, in a partially shaded place in the open ground, and mulch them with litter of any sort, if the weather sets in very dry; remove suckers, and cut off any strong growing shoots, so as to enable the plants to form a regular head for the next season. Give air freely to any plants still within doors; and if the evenings be hot, give air all night.

FOURTH WEEK IN JUNE.

The flower garden is at the close of the month in rather a transition state, from the gaiety of spring to the splendour of summer, when the plants of nearly all parts of the world are turned out to flourish for a short time in our variable climate. The arrangement of the colours, and of the plants to represent those colours, should have been seen to in the winter; if so, the filling up now will have been greatly facilitated. A steady eye should also be kept on plants for propagating, especially in small places, where cuttings may often be taken, and a good stock got without disfiguring the plants too much, if taken often, instead of in quantities at once.

Auriculas will now begin to wear a sickly appearance. If you find the plants eaten, look closely for a small green caterpillar at the backs of the foliage. The green fly will also be troublesome about this time; if you find them in the hearts of the plants, sprinkle a little clean sand among them, the weight of the sand will cause the insect to quit his hold, when you may blow out the sand and fly together; a small tin tube for this purpose will be found useful. Water them moderately; they must be kept moist, and all decayed leaves removed as soon as observed; the surface of the soil should also be stirred now and then.

Carnations. — Continue tying up the blooming stems as they advance; do not neglect top-dressing; if not already performed, you should give your immediate attention to those in the ground, as well as the pots. Keep them clear of weeds, the surface of the soil open by occasionally slightly stirring, and liberally supplied with water.

Pinks. — The blooming season of this admired flower is fast on the decline, and the amateur florist's attention will be more particularly directed to the increasing department—those who have not performed this duty must now commence in earnest, for there is no time to be lost, if you wish to have your plants strong. Particulars for this operation have been given in a former number of this work.

Tulips.—The roots may now be taken up; choose a dry day for the purpose; they may be placed in a frame in a south aspect till fit to put away; if the glass be kept on, it should be lifted at back and front, and covered with an open mat or other shading during the heat of the day. Attend to the shading and watering of ranunculuses, and the tying up dahlias, &c., as last directed.

Tulips, Crown Imperials, Jonquils, &c.—Tulips will now be mostly past flowering, and their leaves decaying: it is then proper time to take up their roots where intended, and to separate the offsets. Let this be done in dry weather, and as soon as they are taken up out of the ground, spread them upon mats, a little in the shade from the mid-day sun, to dry. When they are thoroughly dried, and somewhat hardened, let them be very well cleaned, and separate all the offsets from the long roots; then put each sort separately in bags, or boxes, or upon shelves, and keep the whole in some apartment till September, October, or November, at which time plant them again. When there is a collection of named tulips, hyacinths, or any other assortment of bed flowers, they are planted according to a plan of the bed, having subdivisions numbered. A numerical list contains the names, so that the same bulb or kind occupies the same spot in every year, and in order that the bulbs may not be intermixed when out of the bed, a set of drawers are subdivided and numbered correspondingly with the bed and list, by which means the collection is always kept correct without intermixture. When such a named collection is taken up, each bulb is laid on the spot where it grew, till it is dry enough to be placed in its own compartment in the drawer till planting time.

Ranunculuses and Anemones.—The foliage of these flowers must now be strongly watched. As it begins to decay at bottom, take the roots up and dry them in the shade; then when they are perfectly dry, deposit them in a dry room, till the time for planting them again in autumn and spring.

Propagating Herbaceous Plants by Dividing their Roots.—Many of the more rare herbaceous plants which do not readily perfect seeds, or are short-lived with us, may be prolonged by dividing their roots, either by making cuttings of the stronger roots of some species, or by dividing the roots having a portion of their crowns or the rudiments of the stalks attached to them.

In either case they should be carefully separated, and planted in a bed prepared as directed for cuttings, and covered with a hand-glass until they have taken root.

Pelargoniums.—The early-flowered pelargoniums now rather exhausted should have the bulk of their tops removed and made into cuttings; the old stock may then be thrown on their sides in a shady situation until they break buds half an inch in length, when they must be disrooted and repotted in rather reduced pots.

Cinerarias.—Those which are exhausted may be put in an old frame or pit and fumigated; they may then be cut down and turned out into a raised bed in the garden. They will here feed and produce an abundance of suckers, by a little attention in regard to watering, &c.

Fuchsias.—Let the fuchsias have ample supplies of water, and provide a succession stock in case of exhaustion.

The Hybrid, Perpetual, Bourbon, and Tea Roses.—These flowers which have been in the cut all the spring should now be compelled to rest. They should be placed in a somewhat shaded situation, and all disposition to break into young buds sedulously kept back. They may remain thus for a month, when they should be taken out of their pots, partially disrooted, and inserted in fresh pots surrounded by fresh composts; by the month of September they will be filled with new roots, and will, under good management, bloom the greater part of the ensuing winter.

Calceolarias.—These should now have as much sun as possible, except those which are seedlings. Air may be left all night. Give plenty of water to those which may be retained in the house, and to those in the open ground; the supply must be regulated according to the state of the weather. The tallest should be securely fastened with stakes.

Greenhouse Plants should now be got into their summer quarters. For this purpose, a shady but airy situation should be chosen; a most excellent place is the tulip bed, after the bulbs are removed, as by means of the awning, any quantity of shade may be given, and drying, parching winds be avoided. Keep the houses thoroughly clean and sweet, giving the plants retained in-doors all the room and air possible.

Successional Flowers.—Propagate and plan for successional flowers in good variety throughout the season; this, with attention to keeping those already planted out with a neat and picturesque effect, will embrace the principal points in summer flower gardening. All delicate flowers should be shaded from intense sun-heat, in order to prolong their existence; the best means of doing this would be that plan which, whilst it secured the end in view, offered the least obstruction to the examination and display of the flowers.

FRUIT GARDEN.

FIRST WEEK IN JUNE.

Melons.—The melon plants which are in frames should still be shaded when the sun shines vehemently. This should be particularly practised when the plants do not stand the sun well, but shrink or flag their leaves considerably, owing to there being a want of depth of earth on the bed, or to the same being too light and loose, or where the plants are situated very near the glasses, as the full noon sun would be apt to scorch the leaves, and, in some degree, shrink and exhaust the juices of the vine and roots, whereby the advancing young fruit would be checked, take an irregular growth, and become stunted and ill-shaped. Therefore, let some slight shading of mats, &c., be spread over the glasses every day when the sun shines strongly, but this need not be done before nine, ten, or eleven o'clock, according to the heat of the sun, and the mats may be taken off again about two or three. Moderate refreshment of water at times will also be very serviceable to these plants, especially to such as are growing in beds when there is but a shallow depth of earth, or where the mould is of a lightish temperature. But in beds where there are twelve inches' depth of good mellow loamy compost, or other good, temperate fertile earth, the melon plants will require, but moderate supplies of water, once in a week or a fortnight, as occasion may require, keeping the earth moderately moist, especially whilst the plants are about setting the general crop of fruit; when, however, a sufficient supply is set, and advanced a little in growth, water more freely, never, however, immoderately, as much moisture proves hurtful to the roots and main stem of these plants, being apt to make them rot and decay. Continue to cover the glasses every night with mats, till about the middle of the month. The melon plants which are growing under bell or hand-glasses should have full liberty to run out. Let each glass be raised and supported upon three props, about two or three inches high, and lay the vines or runners out carefully, and in a regular manner. Continue to cover them every night with mats, till about the middle or towards the latter end of the month, and then, if warm, settled weather, the covering may be entirely laid aside; but if the weather should prove very wet, in that case the coverings may be used occasionally.

THINNING WALL FRUIT.—Thin the wall-fruit, where produced thick, and still remaining too close upon the trees. This is to be understood principally of apricots, peaches, and nectarines, and which should be completed the beginning of this month. In thinning them, let the same rule be observed as has been already laid down. Thinning fruit is one of the most necessary labours of the gardener. It is usually restricted to forced fruits in houses, or to apricots, peaches, or nectarines on walls. But the apples, pears, and even plums, cherries, goosoberries, and currants, often reqnire such manipulation. The high perfection of these several fruits for the table is really of more value, and as much esteemed, as the most abundant crops of small inferior fruit. Besides, it is a relief to the tree, and enables it to yield more abundantly in the following year. A pair of scissors in an active hand will get over much of this apparently tedious work in a day.

NEWLY-PLANTED TREES.—Examine fruit trees that were planted last autumn, winter, and spring, in particular standard trees, see that they be well secured, so that they cannot be rocked about by the wind.

APPLE TREES, PEARS, AND PLUMS.—Where disbudding was neglected during the preceding month, the trees both on walls and espaliers will present at this time an exuberant growth of shoots. This disorderly appearance renders necessary the pruning the whole off, except the leading shoots of the branches. Now this is an unnecessary waste of the vigour of the tree, and at the same time an unnecessary excitement and extension of the roots, which prompts to increased exertion in the next year, and to produce over again another useless birth of unfertile wood to be again cut away. Now it is evident, that had disbudding prevented the production of these shoots, the roots would not have been excited, and the whole system would have remained in that moderate condition so necessary to fertility. Nothing requires the exercise of so much skill as that of keeping trained trees in a moderate state of growth, so that they shall be at the same time fruitful. Trees which have an artificial form imposed upon them, and by which they are also reduced in their natural volume, are ever striving to assume their normal form, and continuing in a constant struggle between art and nature, the first repressing, and the last ever endeavouring to escape from the shackles of the trainer. Preventing luxuriance by disbudding at this season, as already observed, is the readiest way of inducing moderate growth, for if any superfluous shoots be allowed to come forth, only to be afterwards pruned off, the system is thereby deranged, and neither fertility nor symmetry will result.

DESTROY SNAILS AND OTHER INSECTS.—Destroy snails; look for them in a morning or evening, and after showers of rain in particular, upon the apricot, peach, and nectarine trees. And where destructive insects prevail, on any kind of wall-trees, &c., annoying the leaves, tender young shoots, and fruit, and greatly retarding their growth, every probable means should be employed to extirpate them as much as possible.

GOOSEBERRIES.—About the beginning of this month examine the gooseberry bushes, and slip off all improper suckers and every luxuriant shoot, such as the French call *gluttons*, with a forked stick. Gooseberries are very much infested with a small green caterpillar, which frequently devours both leaves and fruit. Great attention must, therefore, be paid to their first appearance on the bushes, for if not destroyed early, they will increase so fast that they will soon devour all the leaves, and the fruit will then be good for nothing.

MILDEW.—The mildew is one of the worst diseases to which peach and nectarine trees are subject; it is supposed to be a kind of fungus. So soon as it appears on the leaves and points of the shoots, let them be instantly smeared with strong soap lather, and this continued, both as a cure and preventive.

SECOND WEEK IN JUNE.

APRICOT AND PEACH TREES.—If the apricot, peach, and nectarine trees were not looked over last month, in the young shoots of the year, in order to give the requisite regulation of summer pruning and training, it must now be done. The work should be commenced in the beginning of the month, and followed up with the utmost diligence till the whole be completed; for were these trees suffered to remain long in the wild and confused manner in which they naturally grow into at this season, it would not only prove detrimental in a great degree to the trees, but would also very much retard the growth and ripening of their fruit.

CHERRIES.—Cherries on the wall and standard trees should be protected from birds, by means of nets; they should be put on walls, as recommended for screening blossoms; that is, so far as regards setting them out properly with sticks from the wall. Standard trees may be secured by covering the top of the trees with a large net, and securing it at the bottom. Cherries are sometimes cultivated in an enclosure by themselves on dwarf standards, and in this way they are easily preserved from the attacks of birds by means of nets. In some parts of England, cherry grounds are enclosed with high wire fences, sufficiently fine to prevent the birds from getting in, and secured by means of large nets, which are sufficiently elevated to allow the trees to attain their desired height. Underneath these trees, which are regularly trained, dwarf standards, such as strawberries, currants, and gooseberries, are planted, which being protected from birds, remain long on the plants after all the fruits of the same sorts are over in the garden, with the exception of those which are matted on the north walls.

STRAWBERRIES.—Where now plantations of strawberries are wanted, it will about the middle of the month be a proper time to preparo a good stock of plants for that purpose; choose principally the young runners that issue from the sides of the old plants. They may be, if already rooted, planted some in the beds or places where they are finally to remain, but it would rather be advisable to plant a principal number in a nursery bed, in a shady situation. Put in the plants five or six inches asunder, and give a gentle watering, in order to settle the earth about the roots. There let them remain till September or October, by which time they will be strong and in fine order to transplant, and are then to be planted out for good, fifteen inches asunder every way. Procuring strawberry plants at this season is not commonly practised, but is much the best way, for the plants will be much finer and stronger by September than they can be procured at that time from the old buds, and will bear sooner; or they may be nursed where they grow, in the following manner:—Before the old plants put forth their runners, make a furrow along between the rows, fill this furrow with very rich loam and dung mixed, upon this lay ranks of the strongest runners, and peg them securely down; here they will soon make strong independent plants, fit for potting or transplanting in August. This is also the proper season for preparing plants for forcing; one good method is by plunging the pots filled with suitable compost, between or near to the rows or beds of old plants; select the best runners and place them, three in each pot, close within the rims, fixing them there with hooks. There they will soon strike root, and be very fine plants when removed in September, at which time they may be shifted into large pots, and again plunged in some convenient place till taken into the house. During their growth, let them be kept clear of their own runners; or, for immediate bearers, some of the young runner plants of the Alpine or prolific monthly strawberry may any time in the month be planted out. They will bear fruit the same year, both on the present plants and their runners, in August, September, and October, and in most seasons this sort of strawberry will bear till near Christmas, if in a warm border, or defended under frames and glasses.

WALL, ESPALIER, AND STANDARD TREES.—Let the advancing shoots of wall and espalier trees that were singled out, be trained in as they advance, that is, those necessary to be laid in, for forming or extending trees yet in training; cutting clean away such shoots as were left for fear of accident, and which may not now be necessary. The shoots on the leading stems of trees training horizontally must be carefully laid in, right and left, one, two, or three pairs, according to the strength of the tree, and at the distance of eight or nine inches apart, carrying the uppermost of the best upright for a leader. All shoots, except the leader on the side branches, may now be cut clean off, thus throwing the whole strength of the tree into the shoots to be extended for its enlargement. The shoots of nectarines and peaches may generally be laid out at a distance of five or six inches from one another, allowing each a run of from twelve to eighteen inches, according to their strength; that is, shoots of full grown trees in a bearing state. The shoots of trees young and vigorous, pushing wood to fill their spaces, will require more room each way, particularly as to length.

SUMMER PRUNING CURRANTS, GOOSEBERRIES, AND RASPBERRIES. — This very necessary operation is but too seldom practised, even in our best regulated gardens. The propriety of the practice, however, cannot admit of a doubt: and where it has been judiciously performed, the fruit has been essentially benefitted, both in size and flavour. For this purpose, all the young shoots that proceed from the centre of the two former should be removed, and those which proceed from the main branches moderately thinned, so as to admit the rays of the sun, and permit air to act freely through all parts of the plant. In regard to the latter, if part of the shoots that issue from the stools be twisted off or otherwise destroyed, it will let in the light and air, which will not only improve the fruit, but will also greatly aid to mature the shoots intended for bearing the following year.

VINES.—Shorten every shoot to the first or second joint above the branch, and allow one bunch to a branch; as soon as they are set, give them a moderate thinning.

FIGS.—Continue to thin and to pinch off the point of the young shoots, when from six to nine inches long, and so induce the tree to form spurs, and make moderate growth.

THIRD WEEK IN JUNE.

FINAL THINNING OF WALL-FRUITS.—The stoning of peaches, nectarines, and apricots will now be nearly over, and all danger of their casting their fruit at that precarious season be past. They should now be thinned out to their respective distances, leaving, however, a few more than enough, to be picked off occasionally, till towards the middle or the end of July, as a provision against accidents. Sometimes many will drop off between their stoning and their taking their first swelling, as it is called; but all thinning should be completed before they take their last swelling, for, if delayed, it will be too late. Peaches, nectarines, and apricots are usually thinned with the hand, but this is by no means a good method, for where they are set very thickly, it is impossible to pull them off without damaging the stems of those left on the tree. It is much better to cut them out with a sharp-pointed knife, which will be done quite as speedily, and without endangering those that are left. With respect to the quantity to be left on a tree, much must depend on its size and strength, and whether it be an established tree or still in training. All healthy trees are to be allowed to carry a greater quantity than those in a debilitated state. Young trees, still training, unless very gross indeed, should also be well thinned of fruit, or their progress in filling their allotted share of the wall or pales will be prevented. On the larger sorts of peaches, apricots, &c., in a healthy, full-bearing state, one fruit for every square foot of surface may be taken as a good medium; that is to say, a tree occupying a space equal to one hundred square feet should be allowed to ripen one hundred fruit. The smaller sorts may be allowed to ripen one-third more, according to the size and health of the trees. Plums should be thinned to a reasonable extent, and not be allowed to touch each other, if on spurs; and, if on young wood, and of the larger sorts, to be full six inches apart. Few gardeners have the resolution to thin sufficiently, all being ambitious of large crops; but, by thinning, that which is lost in number is more than made up in weight and quality. It is a just observation of a very intelligent gardener, *that every one ought to thin his friend's trees.* The effect of thinning, like most other operations in gardening, can only be discovered by comparison. Let, therefore, one tree be thinned, as now directed, and another only half as much, and it will be found that the tree fully thinned will produce a greater weight of fruit, and be incomparably more beautiful and higher in flavour.

MELONS.—Take care now of the melons, and particularly of the plants in frames, whose fruit are beginning to ripen. Where any melon plants are crowded with a superabundancy of useless unfruitful vines, prune out thinningly the superfluous and unprolific, and all the small fruitless runners; and if the leaves be very thickly placed, darkening the fruit, cut some out also in a thinning order. A second crop of melons may be raised from cuttings taken from the extremities of the shoots which show the most fruit. Prepare the cutting, which should have two advanced joints, by taking off the two largest leaves at the bottom; insert them in pots, two in each; water, and plunge them in a previously-prepared hotbed; keep the frame close and shaded, and in a week the cutting will have struck. The old melon plants, with the soil in which they grew, are all cleared out of the frame, fresh soil put in, and the bed immediately well lined, and the cuttings planted in the usual way. When the plants have pushed about fourteen inches, stop them; fresh runners will be produced, which with the first shoots will bear abundantly.

VINES.—The vines should now be carefully looked over, in order to clear them of such shoots as have been produced since last month. Shorten every shoot to the first or second joint above the bunch, in only one bunch to a shoot.

WATERING WALL-TREES.—Continue the operation of the garden-engine on all kinds of wall-trees, except cherries, and scourge them heartily for the destruction of the red spider, before the fruit begins to ripen, as after that it will be proper to desist for the sake of the fruit, both on account of its flavour and beauty.

FIG TREES.—Fig trees, if not yet had the summer regulation, should now be properly regulated, cutting out only fore-right and other ill-placed shoots, and any of very rampant growth, but retain as many of the well-placed side and terminal shoots as can be conveniently laid in, pinching off at the same time, however, all the terminal buds, if not previously done, to make the trees more fruitful.

FILBERTS.—Rub off and remove all suckers at their first appearance.

RASPBERRIES should be securely staked and tied, and the suckers should be thinned out to four or five.

GOOSEBERRIES.—Those required for tarts may be taken away by way of thinning; those which are required to be fine must be now assisted by thinning; a little liquid manure will be found highly beneficial.

FOURTH WEEK IN JUNE.

BUDDING FRUIT-TREES.—Budding may now be performed on apricots, peaches, and nectarines, plums, cherries, and pears, any time in the month, with most sorts, but the principal budding may be performed successfully about the middle of the month. Budding generally succeeds best when performed in cloudy weather, or in a morning or an evening, for the great power of the mid-day sun is apt to dry and shrink the cuttings and buds in some degree, that the buds would not so readily part from the wood of their respective shoots proper for insertion. However, when there are large numbers to be budded, it must be performed at all opportunities. Budding may also be performed occasionally upon trees that bear fruit. What is meant by this is where there are wall or espalier trees, that produce fruit not of the approved kinds. Such trees may now be budded with the sorts desired, and the budding is to be performed in this upon strong shoots of the same summer, or upon clean young branches of one or two years' growth or more, and several buds may be inserted in each tree, in different parts, by which means the wall or the espalier will be soon covered with the desired kinds, and in two or three years after budding, they will begin to bear.

WALL-TREES.—Where wall-trees have not had their summer pruning, that very needful work should be done the close of this month, otherwise the fruit upon such trees will not only be small and ill-grown, but be greatly retarded in attaining maturity, as well as be of very inferior flavour. Besides retarding the growth and debasing the taste of the fruit, it is also detrimental, in a very great degree to wall and espalier trees, to neglect the summer ordering and nailing entirely till this time, particularly to apricots, peaches, nectarines, and such like trees, as produce their fruit principally upon the one year old shoots.

COVERING UP TO RETARD SMALL FRUIT.—Red and white currants, and Morella cherries, planted on northern aspects, should, as they ripen, be covered up with nets, in order to protect them from birds; and many of the currant bushes may be covered with large garden moss, which will preserve them till a late period. The late and thick skinned gooseberries, red and white currants, in quarters or rows round the sides of the walks, should be examined, and such as are best loaded with fruit should be covered up with mats or nets. The latter method is generally adopted to retard the full ripening of the fruit, and also to preserve it on the trees from the effects of frost. When fruit-trees are covered by the latter means, it is then necessary to examine them occasionally, for fear of their spoiling from damp, in consequence of the decaying of the foliage, and want of free air.

GRAFTING FRUIT-TREES.—A variety of saddle grafting is practised in many parts of Herefordshire, and it is valuable principally on account of its being performed about the latter part of this month; and it is usefully employed in cases where a failure may have taken place in any sort of tree grafted at the usual season. Such trees as have been grafted in spring should be examined, to see that they are not cut with the matting with which the scion was fastened; should this be the case, the bandage must be removed, and the graft secured by another piece of matting, or by tying it carefully at the shoulder.

THE KITCHEN GARDEN.

FIRST WEEK IN JUNE.

ASPARAGUS still continues in perfection; observe to gather the shoots as directed last month. Let it, however, be remembered that it is advisable to terminate the general cutting for the year soon after the twentieth or twenty-fourth of the month, otherwise the roots will be greatly weakened; for so long as you continue to cut the produce, the roots will continue sending up new shoots, though every time smaller, and if continued late in the season would greatly exhaust themselves, so that the future produce next year would be diminished in proportion. Before the asparagus runs up to stalk, the beds should now be perfectly cleared of weeds, for that work cannot be so readily done after the stalks have shot up to a great height. Great care should now also be taken to keep the asparagus, planted last spring, perfectly clear from weeds, and the young plants which were sown in the spring will now be up, and should be carefully hand-weeded.

Borecole.—The brown cole or borecole plants which were sown the beginning of last month or in April, should now have a number thinned out from the seed-bed, and pricked into a nursery bed. Likewise let a number of the forward borecole plants, which were raised in March or April, be planted out finally to remain in rows two feet and a half asunder, and water them.

Brocoli.—Prick out from the seed-bed the young brocoli plants which were sown in April or May. Dig for them a bed or two of good mellow ground, and rake the surface over, then put in the plants, three or four inches asunder every way; water them immediately, and repeat it occasionally in dry weather. Let them remain in this bed about a month or five or six weeks and then plant them out for good. Sow more early, purple, autumnal or cape purple, green cape, and Grainge's early autumnal brocoli seed. This sowing should be performed in the first or second week of the month; that is, if to succeed the plants of those sown in May for a late crop next spring; but if none were then sown, it is most necessary to sow some in the first week this month. The plants raised from this sowing will produce tolerably good heads next February or March. The purple and green cape sorts, likewise Grainge's early autumnal, should not be transplanted more than once, to prevent them buttoning. Another crop of the early purple brocoli may now be transplanted. A superior mode of cultivation practised by some gardeners is to put them in pots of the size called sixteens, filled with very rich compost, placing them close to each other in the shade, and duly watering them till they begin to grow freely; after this the pots are plunged in the open ground at two feet distant from each other every way, and about three inches under the general level, leaving a hollow or basin round each plant, in order to retain any water given to them when necessary. They must be planted into pots immediately from the seed-bed.

Beet (red).—The crop of red beet should be thinned and cleared from weeds, in order that the roots may have sufficient room to advance in their proper growth.

Beet (white and green).—White and green beet are cultivated only for their leaves, which are used in soups, and occasionally to boil and use in the manner of spinach; also when the leaves of the large white beet are grown to a full size they are stripped to the mid-rib, which part being thick and fleshy, is peeled and stewed, and eaten like asparagus.

Cabbages and Savoys.—Now is the time to plant a full crop of cabbages and savoys for autumn and winter service. Likewise plant out the red cabbages which were sown in the spring, and they will be cabbaged by October. In planting out all these kinds, take the opportunity of moist or showery weather, if possible, which will be of considerable advantage; plant them in rows two feet and a half asunder, by two feet distant in each row, and if dry weather, give water at planting, &c. But in gardens where there is not any ground vacant from other crops, or where the necessity exists of making the most of every piece of kitchen ground, the cabbage and savoy plants may be planted between rows of forward beans and early cauliflowers, or such like crops as stand distant in rows, and are soon to come off the ground. Cabbage seed may now be sown of the sugar-loaf, Yorkshire, and other quick heading sorts. The plants of this sowing will come in both for small-hearted young colewort cabbage the latter end of next month and in August, and to cabbage in fine young heads in September, October, November, and December.

Carrots.—The crops of carrots now demand particular care; they must be cleared thoroughly from weeds, and let the plants, where they stand too thick, be hoed or thinned out to proper distances in due time, for it is of great advantage to these plants to allow them sufficient room to grow.

Cauliflowers.—The cauliflower plants sown in May for the Michaelmas crop should now be attended to. Continue to look over the plantations of early cauliflowers now and then, in order to break down some of the large leaves over the young heads, according as they appear in some advanced growth.

Celery.—Transplant celery into trenches to remain to blanch; that which was sown early will be grown to a proper size for this purpose, by the first or second week of this month, when it should be planted; and some of the second sowing should be planted out towards the middle or latter end of the month for a general crop.

CUCUMBERS IN FRAMES.—Take good care of the cucumber plants in frames. They must be well supplied with fresh air and water. The cucumber plants which are under hand or bell-glasses, must now be suffered to run freely from under them. Each glass must be raised upon three or four props, and the vines and runners of the plant must be trained out with care and regularity. The cucumber plants which were sown the latter end of last month in the natural ground to produce picklers, should be thinned when the rough leaf begins to advance in the heart of the plants.

ENDIVE.—Transplant endive for blanching; some of the first sown plants of May will be ready for this, about the beginning of this month.

LEEKS.—Now transplant leeks; observe for this purpose to draw a number of good plants from the seed-bed; trim the long fibres of their roots a little, and the straggling tops of the leaves; then plant in an open spot of ground, in rows eight or nine inches asunder, and about six inches from one another in the row, inserting most of the shank or neck part into the ground. Some gardeners transplant leeks in the following manner:—Ranks of holes are made with a large blunt dibble, six inches deep; in these leeks, after being dipped in a puddle of earth and water, are placed to grow, but without closing the earth about them.

LETTUCES.—The lettuce plants which were sown in April and May, should now be transplanted into an open spot of good ground.

PEAS.—Peas may still be sown, and beans may also be planted. Though peas and beans which are planted at this season do not always succeed in bearing abundantly, it will, however, where there is ground at liberty, be worth the trial to put in a few of each, at two or three different times this month, and if the season should prove moist, there will be a great chance of reaping a tolerable crop in August and September. The best beans to plant now are the middling and small kinds; none are better than the white blossom, Spanish, long-pods, Mumford, Mazagan, and the like kinds. But the large kinds of peas, such as marrowfats, &c., may still be sown, and it will also be proper to sow a few of the best kinds of Hotspur, and also some of the pearl sort, which is particularly suitable for a late crop. Observe that if the weather be very dry, it will be proper to soak the peas and beans for a few hours in water taken from a pond or river, or otherwise water the drills well previously to sowing; and as a preventive of mildew on late crops of peas, frequent watering the roots is recommended. Let these late crops be sown and planted in the moistest part of the ground, but not in a shady place; and remember to allow them sufficient room between the rows, for much depends upon that at the time of sowing. Top your beans which are now in blossom.

ONIONS.—Clear the crops of onions, and where the plants stand too close, let them be properly thinned the beginning of this month. It has been lately observed of the onion, and its congeners, the shallot, garlic, &c., that their bulbous roots are not intended by nature to grow within or under the surface of the earth, and, therefore, that it is incumbent on the cultivator not only to take care that they are sown and planted upon rich, well dug, but afterwards firmly trodden ground, but also that the onion seed be covered very thinly, to ensure the production of large bulbs—nay, more, it is advised to sow onions in drills, and after being thinned out to six inches distant, and gained a good hold of the ground, to draw away the earth on each side, so that the plants may be left standing on a ridge, by which management large bulbs may be grown.

RADISHES.—Sow a succession of salmon and short-top radishes the beginning of the month, and more about once a fortnight, in order to obtain a regular succession in all this, and the next month, if a supply be required. Towards the middle or latter end of the month, a moderate portion of the large black, or Spanish turnip-rooted radish, to draw in August or September.

SMALL SALADING.—Sow cresses and mustard, and other small salad seed, once every week or fortnight.

SPINACH.—Spinach may still be sown at two or three different times this month, if a constant supply be required.

SECOND WEEK IN JUNE.

GENERAL DIRECTIONS FOR THE MONTH OF JUNE.—Thin all crops as they advance. Keep the hoe in full employment in every part of the garden. Support with stakes the crops that require it, and water as far as practicable everything that stands in need of it. Destroy insects as well as grubs, which at this season are far more mischievous in the garden than at any other period. Let every part of the garden now assume a neat and clean appearance. Where watering is necessary, let it be done from four to six in the morning, and from six to nine at night.

There is no garden so situated but water might be brought to it by some means or other; and those that are indifferently supplied with this necessary article, will be subject to many disadvantages, over which the cultivator can have little control. Complete the preparation of the ground for the winter crops, and proceed to prick out the plants. Choose dull and showery weather for the purpose of transplanting. Spread quick lime and salt to destroy slugs and other vermin.

BEANS.—Beans for the last principal crop of the season may be planted about the beginning of this mouth. The sorts most proper for the early crops are also the fittest for the late ones. Plant the mazagan bean, therefore, for this crop, in an airy and somewhat exposed situation. If planted under the shade of trees the plants will be liable to be destroyed by a small parasitical fungus *(Uredi fabœ)*, which has a rusty appearance, and is very destructive to late crops in shaded situations. Beans which are now in blossom should be examined and topped, according to the directions given last month.

BORECOLE.—The different sorts of greens known under the general name of borecole, should be planted out according as the ground becomes vacant.

BRUSSELS SPROUTS. — Plant out a full crop, at eighteen or twenty inches distant; they are a spiral vegetable, and do not spread out much at top.

CAPSICUMS. — Capsicums may still be planted out against a south or west wall. They should be nailed up or slightly protected.

CARROTS.—Now finally thin out the crops of carrots, and clear them of weeds by a frequent application of the hoe.

CARDOONS.—Plant out cardoons in the place where they are to remain to blanch. These plants must be allowed a considerable space of room to grow, in order that they may be conveniently earthed up to the proper height. Choose a spot of the best ground for them, in a free situation; put in the plants in rows, allow the rows a yard and a half distance, and the plants three feet and a half from one another in the row, planting them either on level ground, or make shallow holes like a basin at the distance above-mentioned, and so put one plant in each hole, or occasionally planted in trenches like celery. Let them be watered as soon as planted, and at times till they have taken root. The reason for setting the above plants at so great a distance from one another is, as before alluded to, in order that they may not only have full scope for their growth, but that a sufficient quantity of earth may be obtained between them, so as to earth them up to a due height for blanching; for when the plants arrive at their full growth, they are between four and five feet high, and should be earthed by degrees towards their tops, first tying the leaves of each plant closely together with haybands.

CELERY.—The plants pricked out in May will be fit to transplant into the trenches about the middle of this month. A few only should be planted at this time, as they are apt to run to seed.

CAULIFLOWERS.—The cauliflower plants sown in May for the autumnal crop should be pricked out, when sufficiently strong, into a nursery bed of rich earth. Shade them from the sun occasionally, in the middle of the day, till they have taken root. The plants are to remain in this bed for four or five weeks, to get strength, and then, in July, to be planted out where they are to remain. They will produce their heads in October and November.

ENDIVE.—The endive sown in May will now be fit to transplant permanently. An open spot of ground should be chosen for the plants. Let it be well dug and manured. Put the plants in line, about one foot or fifteen inches asunder, and let them have some water as soon as they are planted. It is a very common practice to cut off all the top part of the leaves of endive; nothing can be worse than such a practice. The same observation applies equally to leeks and some other vegetables. Endive seed must now be sown for a principal crop, the preferable sort for which is the green curled, not only as being the best for general use, but also as being able to stand the winter better than any other kind. Some broad-leaved Batavian endive may be also sown. This sort grows very large, and if tied up, will cabbage well, and be very white. In hardiness, however, it by no means equals the green curled; tor, towards the latter end of autumn, or the beginning of winter, should the season be wet or frosty, it soon rots, and the expectations of the grower are wholly frustrated.

KIDNEY BEANS.—Plant another crop of kidney beans; they will succeed those which were planted last month. Any of the dwarf kinds may still be planted any time in this month. But in order to have a regular supply, it will be proper to plant a crop in the first week, and let some more be planted about the twentieth, and towards the latter end of the month. The climbing or running kinds of kidney beans, of any sorts, may also, where required, be planted now. Now draw some earth to the stems of the kidney beans which were planted last month. Likewise, place sticks or poles, &c., to the running kinds of beans which were planted in April or May, and let this be done as soon as the plants begin to send out their runners, for they will then readily catch their supports, always twining to the right, contrary to the apparent motion of the sun.

Leeks.—Leeks may now be transplanted, for which purpose an open spot of ground should be chosen, in which they should be planted in rows fifteen inches asunder, and the plants nine inches apart in the line. The ground should be rendered exceedingly rich for this crop, by the application of good manure. In planting, do not press the ground tight about their stems; make the holes large, drop in the plants, and let a little mould fall into them, merely sufficient to cover the fibres.

Lettuces.—Some lettuce seed may now be sown for the raising of plants to supply the table in July, August, and September. For this sowing we recommend the Cos, Silesia, the brown Dutch, the imperial lettuce, and the great white Dutch cabbage lettuce. Some of these seeds should be sown twice during this month; a moderate crop in the first or second week, and a similar sowing towards the latter end of this month.

Onions.—A few might be sown, if required, for salads. Place stakes to those that are retained for seed; examine the beds of the winter crops, and take out the bulbs, the leaves of which have turned yellow.

Potatoes.—Now earth the crops of potatoes, which will at the same time clear them of weeds. They will require no further attention till fit for taking up for use.

Radishes.—A small crop may be sown; to be drawn early, they should be in a moist situation.

Sea-Kale.—The crowns should now be thinned, where they have grown too thick; and it should be done early in the month, so that the buds which are remaining may have time to become strong and vigorous before the leaves decay.

Turnips.—A principal crop of turnips should now be sown, and about the middle of the month, for autumn and winter use; and considerable benefit will be derived in sowing the seeds in showery or rainy weather, or with the prospect of such weather coming on.

THIRD WEEK IN JUNE.

Cucumbers for Pickling. — About the middle of this month, the plants of which the seeds were sown in the preceding month will now be ready to plant out. For this purpose, select a warm situation and light rich earth. They may be planted in patches, three in each, a foot distant from one another. A yard and a half may be allowed to each patch, taking the centre of each as the line of measurement. They may also be planted in one line, about two feet asunder; and if more than one line be required, let them be drawn five or six feet asunder. The plants must be frequently supplied with water, and for a few days be carefully shaded from the sun. This may be effected by turning down large garden pots upon them, which may be gradually removed, that is, in the first instance, in the mornings and evenings, and then entirely. If the situation or season be cold, and there be any spare lights or frames, it will be advantageous to place them over a part of the pickling cucumbers, so as to insure a fine crop, and to come in earlier than those on the open ground. It is always of importance to choose the warmest spot for the cucumber crops, as they will do little or no good if planted in an exposed or cold situation. In dry weather, cucumbers require frequent and plentiful waterings; and in this respect they must be particularly attended to as they advance in growth.

Beet.—If the crops be fairly advanced, the plants should now be thinned. Some persons are apt to defer this operation, but it is always attended with loss if deferred to a late period.

Borecole.—Should any ground have been occupied with early potatoes, the crop of which has been taken up, it will be very beneficial to plant the ground with borecole plants, placing them from twenty to twenty-four inches distant.

Brocoli.—Another sowing may be made for the spring supply. It is now a good season to plant out a main crop, about two feet apart. A good supply of plants should now be pricked out from the seed-bed, to be afterwards transplanted for the winter crop.

Cabbages.—Get ready some good ground to plant out a principal crop of winter cabbages. Let them be planted in rows two feet asunder, which at this season will be room enough, except for the large kind of cabbage, which should be planted two feet and a half distant each way. A watering at planting will greatly promote the fresh rooting of the plants.

Cauliflowers. — The cauliflowers that were sown as directed for May, for a late crop, and to be pricked out about the end of June, will now be fit for planting out for good. Plant in an open exposure, and at only eighteen or twenty inches square, as these will not grow to so large a size as the former crops of the season. Let them be planted in good land, however, in order that they may be got in as great perfection as possible. If the weather be dry, let them be duly watered, and in every other respect attended to, as directed for the other crops of cauliflowers, particularly in regard to hoeing and earthing.

Carrots.—Towards the end of this month, a small bed of carrots may be sown, to afford a supply of young ones, which are by many preferred to those of full growth. They will be fit for use in October and November, and, with slight protection, continue good during winter.

Coleworts.—About the latter end of this month, plant out the coleworts, sown for the purpose in April or May. Being intended to come in as small winter and spring greens, they need not be planted on rich soil, nor be allowed much room. Nine or ten inches square are sufficient, or even seven or eight in poor land.

Kidney Beans.—Plant a late crop of kidney beans. Either the dwarf or running kinds may still be planted, or some of both, but most of the dwarf for main crop. The seed, however, must not be put later into the ground than the last week in this month, particularly that designed for a full crop.

Lettuces.—Thin and transplant lettuces. The Cos, Silesia, Imperial, and all the sorts of cabbage lettuce, and brown Dutch kinds, &c., which were sown last month, should now all be thinned to a foot distance, and a number transplanted. For lettuces, allow them a spot of the richest ground, set them the distance of twelve or fifteen inches from one another, and the same distance between the rows. Water them as soon as planted, and afterwards, at times, till they have all taken root.

Leeks.—Choose a piece of good ground, and it will be an advantage to the plants to dig in some mellow, rotten dung. Plant them either in continued rows, nine by six inches asunder, or in beds, six rows in each, and six inches distant in the rows.

Peas.—A few of Knight's marrow pea may be sown, or the Charlton, or early frame. Give them occasional waterings in dry weather. They may yield a few peas in autumn, if the weather be mild. Little dependance, however, should be placed on this sowing, but the crops of Knight's marrow will, if properly attended to, come in both abundantly, and in all probability will last until the frost destroys them.

Turnips.—The latter end of this month is a fine season to sow turnips for the service of autumn and winter; that is, the plants raised from this sowing will come in for growing in September, and improve in growth from about Michaelmas to Christmas, and if a moderate winter, will continue good till the following spring. In sowing this seed, choose an open situation, dig the ground, and sow the seed while it is fresh digged. Great care should be taken not to sow it too thick. This seed is very small; two or three ounces will sow ground enough for a middling or large family, as that quantity of seed will sow at least fifteen or sixteen rods or poles of ground, for when sown in fields, the common allowance is about three pounds to an acre of ground. At a season when the turnip fly is not apprehended, the seed may be put into the ground without any preparation, but in the hot weather of summer it is advisable to use some cheap effectual *preventive* (?) of the fly.

FOURTH WEEK IN JUNE.

Asparagus.—Much of the smaller spray of asparagus should now be suffered to grow away on the beds in full cut. The time is nearly arrived when all further cutting should cease.

Beans.—A few magazan beans may be sown the last week in this month. Sow them on a sheltered but not shaded south bordering. If the autumn be mild, they may probably produce a few dishes of young beans, but if not, the trouble is not great.

Brocoli Seed.—Now sow also some brocoli seed to come in for a late spring crop. As this is to be the last sowing, it should be done at the end of this month. The seed should be sown in a bed of rich mellow earth, and in dry weather now and then moderately watered. The plants raised from this sowing will be ready to plant out for good in the middle and towards the latter end of August and beginning of September, and produce small heads in April and the beginning of May.

(Continued on page 178.)

THE RANUNCULUS.—*See page* 181.

THE CACTUS.—*See page* 183

THE KITCHEN GARDEN.

CONTINUED.

Brocoli. — Transplant a full crop of brocoli. The plants must now be planted where they are to remain, and for that purpose dig a piece of the best ground, and if previously manured, it will be of great advantage to this crop. Let the plants be set in rows, allowing at least two feet between each row, and generally the same distance from one another in the row. The tall large-headed purple, the cream-coloured, and the spring white, or cauliflower brocoli should be planted at not less than three feet apart. Give them water as soon as planted, and if the weather should prove dry, let the waterings be repeated once every two or three days till the plants have taken root. Brocoli being one of the most esteemed culinary vegetables, requires more than ordinary care to have it in perfection; as soon as the plants are large enough to be pricked out, it should be done in a rich and open spot, and if from thence transferred to another intermediate nursery-bed and placed in very open order, it will greatly strengthen and render them stocky. Indeed, upon the treatment the young plants receive, and the quality of the soil given them, the whole chance of success depends.

Cauliflowers.—In the general crops of cauliflowers, some will be still in good perfection, but do not require any particular care, only to break down some of the long leaves over the advancing flower heads, in order to preserve them from the sun, rains, &c. Or any of the late spring planted crops, advancing for flowering this or the next month, may be assisted by hoeing between and drawing some earth up about the stem of the plants. The cauliflower plants sown in May for the autumn crop must now be planted out where they are to remain. Cauliflowers, as well as all the cabbage tribe, are very liable to the anbury, or club root. All kinds of alkalies are injurious to the insect tribe, and if the ground were well sprinkled with soap-suds in which the plants are placed, the ravages of the insect might be prevented.

Carrots.—Some seed of the horn carrot may now be sown, in order to raise some young carrots for the table in autumn or winter. Those raised from this sowing will come into use after Michaelmas, be very fine in October and November, and continue good till the following spring.

Celery.—Allot for this crop an open compartment of the best rich ground; then mark out the trenches ten inches or a foot wide, and full two feet asunder; or rather, if good ground, allow two feet and a half or three feet distance. Dig out each trench one spade wide, and a moderate spade deep, or about six or eight inches clear depth, the bottom well loosened, laying the earth that comes out neatly in the spaces between the trenches, equally on both sides, which serves, in part, in earthing up the celery when of proper growth; then adding some rotten dung, dig it in a moderate depth, levelling the earth for the reception of the plants. Then draw the plants. Choose the strongest, and trim the ends of their roots, and the tops of the long straggling leaves; and then plant them in one row along the middle of each trench, setting the plants five or six inches distant in the row. Give them some water immediately, and let this be repeated in dry weather until the plants have got root.

Endive.—Plant out, to supply the table in autumn, a number of the strongest plants. Endive requires a good ground, and, if well manured, will be of additional advantage. Put in your plants the distance of a foot every way from one another, and water them as soon as planted, which in dry weather must be repeated once in two days, till the plants have taken root. Endive seed should be sown for a principal winter crop. The green and white curled are very good sorts for general use, but any of the other sorts may be sown, according to fancy. They are divided into two general divisions. The first are the curled endive, with narrow leaves, and are by the French called *chicorees*. The other division comprehends the broad leaved sorts, commonly called the Batavian endive, the *sicaroles* of the French. The sort called the small Batavian is decidedly the best of the Batavians, as it blanches with little trouble, and is mild without being bitter.

Garlic and Shallots.—Examine the beds of garlic; if any be full grown, pull them up. This is known by the leaves, for when the bulbs are fully swolen, the leaves will change yellowish, and begin to wither and decay; if materially, the bulbs may be pulled up.

Leeks.—If a sufficient supply was not planted the beginning of the month, let it now be done without delay.

Lettuce Seed.—Dig a spot of the best mellow ground, and sow some lettuce seed. The Cos, Silesia, imperial large white, and the brown Dutch cabbage lettuces, or some of each, are still the most proper kinds. These sowings will raise a proper supply of good plants to furnish the table regularly, the latter part of August, and all September, till October.

PEAS.—The crops from the sowing of peas at this period cannot be greatly relied upon; nevertheless, if there be any spare ground, a row or two of the British queen or the wrinkled marrow may be sown. The seeds of those large kinds may be slightly malted, and the usual wet dung trench made for them. When they are as high as the top of the sticks, let their tops be taken off.

RADISH (TURNIP-ROOTED).—This is an excellent time to sow the large turnip rooted radish for autumn and winter. There are two sorts, generally known by the name of the black and white Spanish radish. The black sort is the most esteemed, is the best, and the most generally known and cultivated; grows as large as ordinary turnips, and very hardy to stand the winter: is by many people much admired, for autumn and winter. to slice in salads, or eat alone, raw; the seed may now be sown, or may be deferred till the beginning of the ensuing month. Sow some now for the autumn crop, and the principal winter crop, from the seventh to the fourteenth of the next month. They should be sown in an open space of fresh dug ground, broadcast, trodden down, and raked in regularly. When the plants have been come up some time, they must be hoed out to about six or eight inches distance; they will then have proper room to swell, and be ready to draw for the table in September and October; attain full growth by November, and continue good all the winter.

SAGE AND SAVORY.—Plant now as soon as possible slips of sage where it was omitted in the former month; also slips of hyssop, winter savory, lavender rue, and such like herbs.

WINTER SPINACH. - Get ready some ground in which to sow some winter spinach. The best sort to sow is the prickly seeded or triangular spinach, this generally being the hardiest to endure the cold and the wet in winter. Choose a clear dry lying compartment of good mellow ground, that enjoys the winter's sun, and let it be neatly dug; sow the seed whilst the surface of the ground remains fresh, mellow, and moist, sowing it broadcast, moderately thick, and if dry ground, tread the seed lightly down in the earth, and rake it directly into the ground in a regular manner. A new method of growing spinach has been lately practised by several individuals, with the view of increasing the bulk of the plants. A shallow trench is filled with rotten dung and dug in; along this the seeds are sown in a drill, and when they rise are set out at good distances from each other, and consequently arrive at an unusual size before they are arrested by frost. Their luxuriance, however, renders them much more tender than if their growth had been more moderate and on poorer ground.

THE CHERRY.

THE cherry is considered by the majority of botanists to be a native of Britain, whilst by others it is regarded as a native of Persia, and introduced into this country by the Romans.

The common wild cherry-tree, which is frequently found in woods and hedges, is considered by Linnæus to be the parent stock from which almost all our cultivated varieties are derived. In the British flora the cherry is divided into three sections; first, the heart-shaped fruit; second, the round-fruited; and third, the cherry which is adopted for culinary purposes. Of the varieties included in these sections, we shall have afterwards to speak.

The cherry delights in a dry, light, and rather sandy soil, but not gravelly, for in the latter it soon perishes Any good garden soil is fit for the cherry; and if the soil be not of itself good, it may be rendered sufficiently so by the addition of one-third or one fourth of fresh light loam, such as is generally used for the apple. Some sorts, such as Mayduke, which is the subject of our engraving, will thrive in any ordinary garden soil, and almost on any aspect with equal success.

The Kentish cherry orchards, so long noted for the excellence and abundance of their fruits, are on a deep loam, incumbent on rock. It is found that on gravelly soils, although it may live and produce fruit for a few years, it will eventually die before it attains either a large size or great age. The cherry gardens between Esher and Hampton Court are on a dry, soft sand, and the trees bear immense crops yearly, and some are of an age beyond the ascertaining with any degree of accuracy. Such are also the cherry gardens between Ostend and Bruges, in Flanders, where the soil for leagues is merely a soft, dark coloured sand.

The cherry produces its fruits on spurs, and on the young wood of the preceding year. If on walls or espaliers, the cherry-tree should always be fan-trained, in doing which, the branches should be arranged at the distance of eight or nine inches apart, according to their strength and size of foliage. Old trees are apt to form the spurs in clusters, which ought to be neatly thinned out, chiefly cutting away the parts farthest from the wall, and retaining those nearest to it, in order that the fruit produced on them may be benefitted by its influence. If the trees be in a healthy state, and if there be an appearance of plenty of fruit buds on the young woods, that is, the shoots of the preceding year, the largest of the spurs may be cleared away, or very much thinned, as the fruit produced from such young shoots will be much superior both in size and flavour to that produced on spurs.

It is our opinion that the summer pruning of cherries as standards has not been attended to so much as the subject requires. Dwarf standards of cherries may be as conveniently pruned as the gooseberry or currant, and much in the same manner; that is, by displacing all ill-placed and superfluous shoots, thereby admitting more light, air, and heat to the centre of the tree.

During the present month, and afterwards in July, cherry-trees trained on espaliers and on walls will require looking over, with the view of removing all superfluous and ill-placed shoots close to the old wood, and shortening such as are intended for artificial spurs into one or two eyes. Morella cherries differ in their habit and mode of growth from all others, and as they produce a greater number of young shoots, cultivators too often widely err in being afraid of the reducing the redundancy. In order, in some measure, to correct this common error, no such shoots should be laid on nearer to each other than from three to four inches. These shoots should in the month of May be laid on at full length, leaving the shortening of them till the winter pruning.

Of all fruits accelerated by artificial means, none are so difficult to obtain as cherries, as they are apt to shed their blossom without setting their fruit. This is sometimes owing to imperfections in the parts of fructification, which is often found to be the case also with trees in the open air. The most successful forcers of cherries agree in giving as much air as possible, and regulating it as nearly as possible to the state of the atmosphere, at the time the trees are in blossom, and until the fruit be set, thus giving strength to those parts naturally debilitated, and which would be rendered more so if confined in a close atmosphere.

The sorts most generally preferred for forcing are the Mayduke and sometimes the Morella. The latter sort is much improved by being forced, and, generally, is a better bearer than any of those which produce their fruit upon artificial spurs; and from the natural character of this tree, its bearing its fruit upon the young wood of last year's growth, it is capable of a mode of training more suitable to the confined space of a forcing-house than any other.

Cherries are subject to insects, both in the forcing-house and on the open wall; care must, therefore, be taken that they do not get ahead, for if they do, the injury will be considerable. The green fly will be apt to visit them as soon as the young leaves and shoots come out, and recourse must then be had to fumigation with tobacco for its destruction, as well as the syringe applied with all its force upon them at such times as the blossom is not endangered by it. There is a small caterpillar which is often very annoying to the cherry, and this must be looked for carefully; whenever any of the leaves appear curled up, the insect is almost sure to be found within them; these for the greater security should be pricked off and instantly destroyed.

The fruit of the Mayduke cherry will remain some time unchanged on the tree after it is ripe, but considerable care and attention are necessary to protect it from the ravages of birds, which is usually done by covering the tree with fine netting, which should be applied as thinly as it can possibly be done, or there will be great danger of fruit rotting or becoming mouldy, should there happen to be a great fall of rain.

The cherry-tree grows to a large size, and its wood is highly valued by turners and musical instrument makers, from its suitableness for being bored and formed into smooth tubes. It is also frequently made use of by the wood engravers. In the luxurious East, it is much used for the tubes of tobacco pipes. The fruit of the cherry seems less impaired by growing in a wild state than any other garden fruits. In Scotland, the wild cherries called *geans* are small, but fine flavoured, and in Germany, the favourite liquor *kirschen wasser* is made from the juice of this species of fruit.

In regard to the Mayduke, which may be styled the prince of cherries, it was not noticed by Ray in 1688. Rogers says it was introduced into this country from France about one hundred and fifty years ago. It is mentioned by Duhamel, and before him described by M. Marlet, under the name of *cerise royale native*—a character it well deserves, as being not only early, but, as he expresses himself, "worthy of being partaken of by the greatest monarch that ever swayed a sceptre."

We have already enumerated the three sections into which this fruit is divided. In the first section, or the heart-shaped fruit, the most approved sorts are:—The Black Heart—Black Tartarian; Florence; Elton; Black Eagle; Bigarreau; White Heart; Knight's Early Black; Early Purple Gnigue.

In the second section or round fruited:—Early May; Holman's Duke; Mayduke; Waterloo Late Duke; Belle de Choisy.

In the third section, for culinary purposes:—The Kentish; the Morella; the Melon.

THE RANUNCULUS.

> From the soft wing of vernal breezes shed,
> Anemones, auriculas, enrich'd
> With shining meal o'er all their velvet leaves,
> And full ranunculus of glowing red.—THOMSON.

IT is generally credited that the ranunculus, which is the pride and ornament of our gardens, is a native of the Levant, and we are informed by certain historians that it was a flower greatly prized in the imperial gardens of the seraglio at Constantinople, at a period long preceding its introduction into this country, which is supposed to have been in the reign of Queen Elizabeth; for Gerard says that many were brought from Asia in his time, and flourished as well in the gardens of *merrie* England as in their native soil.

January is the most suitable month for sowing the seed of the ranunculus, and it is an operation that requires considerable delicacy and management. At the appointed time, procure some large-sized pots, which are greatly to be preferred to shallow boxes or pans, which are so strongly recommended by some florists, and fill them within one inch with the soil recommended for growing the tubers in, gently knocking the bottom of the pot against the ground to settle the earth down. Upon this place the same kind of soil, sifted through a fine sieve that will let nothing larger than a radish through it, and strike this off level with the edge of the pot. Upon this the seeds must be sown thinly, with the utmost allowable regularity, and in such proportion that not more than four or five seed should be found within a square inch, and upon the seed sift as much more soil as will just cover it, and no more, so as not perceptibly to raise the soil above the edge. The seed-bed must be kept moderately moist, by watering through a finely-perforated rose-fitted can, so that it may fall gently and evenly over the bed. Soft water is to be preferred, and should be previously exposed to the sun, in order to ameliorate the temperature. Protection from the weather and occasional shading are required, and must be given, and every weed removed as soon as it is large enough to take hold of, however tedious the operation may appear; for a few days' growth of weeds would destroy a large portion of the young plants. Plenty of air must be given as soon as the plants appear, and watering must not be neglected; as soon as the plants get four leaves, the glasses may be removed all day, except in bad weather, and water must be given only after sunset. It will be necessary to continue the glasses at night, if there be the slightest chance of frost. In this way continue to manage them until they have attained their full growth, carefully removing every weed as soon as it can be laid hold of.

As soon as the plants become visible, it is desirable that the surface of the bed should be slightly disturbed by means of a small-pointed instrument, so as to admit a little air, and allow the seedlings to make their way; the operation requires great care, for if negligently performed, a great number of the plants may be destroyed by the breaking off the fibres, or extracting the roots quite out of the ground. When the plants are all up, and the interior part of the leaves is seen, the quantity of air must be increased, or water supplied as needed; but should there be warm showers of fine rain, it is preferable to submit them to it than to water by artificial means; this treatment is to be continued until the leaves become quite dry and brown, when they may be taken up in the way recommended for the other tubers.

In regard to the soil for ranunculuses, florists differ very considerably. Maddock says, that a fresh, strong, rich, loamy earth is to be preferred for the ranunculus; whilst Hogg says that fresh loam, to which has been added a considerable portion of well-rotted cow or horse dung is better. We, however, consider Mr. Glenny to be a better authority than either, on all points connected with the culture of the ranunculus, and it is his opinion that the soil most proper is a rich, hazel loam; the best mode of preparing which is to obtain turfs from some pastures, cut about three inches thick, and lay them to rot. This of course takes time, but unless the soil be already prepared, this mode of providing will be the best. Supposing this cannot be got, the next best mode is to get the top spot of a meadow, where the soil is loam, and lay that by; but as there will not be one-fourth so much vegetable mould amongst it in proportion to the quantity of loam, the deficiency would have to be made good by leaf mould, that is, the mould of decayed tree leaves to be added, or by decomposed cowdung. With regard to any mixture, the nearer it can be brought to the same description of soil as the rotted turfs would make, the better it would be. If the loam be pure as it is when dry from beneath the sod, and what may be called clean, it will require three measures of loam, two of leaf mould, and one of thoroughly decayed cowdung; this should lie together in a heap, and be frequently turned and forked over, to clear it from snails and wire-worms. The loam which should be used should be of that description which does not adhere too closely; loam which when a handful is squeezed closely should retain its shape when laid gently down, but which will break easily when pressed in one spot. The ground in which the ranunculus is grown must be well drained, and, indeed, for everything this is almost the first point to be attended to. The bed should be dug out from a foot to fifteen inches deep, three feet six inches wide, and the matter loosened; upon this the ordinary soil, mixed with an equal portion of rotten cowdung, or dung from an old melon pit, may be returned to the bed to the thickness of six inches, leaving nine to be filled with the fresh loam, or rather mixture prepared, and this may be done in the first week of February.

The mode usually adopted in planting this favourite flower is to stretch a tight line down the centre of the bed and draw a drill two inches deep. In this drill, place the tubers six inches apart, with the claws downwards, and when all are planted, cover the bed with a firm light soil, so that they may be as near as possible an inch and a half below the surface. The following is the method adopted by M. Tripet le Blanc:—In November, spread well-rotted cowdung or thoroughly decayed leaves, four or five inches thick, over the beds which are to be devoted to the ranunculus, and dig it into the ground about four inches deep, digging the bed over several times, so as to be mixed well with the soil. The surface of the bed is then raked smooth, and lines, or rather drills, an inch and a half deep, are hoed on it, so as to form squares four inches on the side, every way. The ground is then left till the beginning of February, when the ranunculuses are planted four inches apart, just at the point of intersection of the lines, and they are covered about an inch and a half deep, rather less than more, with the compost described above, or with garden mould. The advantages gained by digging the earth in November, though the roots are not planted till February, are that the ranunculuses are then planted on a hard bottom, which suits them particularly, and that the gardener is not obliged to dig the earth to mix the cowdung with it in February, when the ground is generally sloppy, and in a very unfit state to be worked.

The ranunculus will continue in flower for a month, if carefully managed; and when the flower begins to show colour, not a sunbeam must be permitted to fall upon it. A canvas awning should be placed over them, but not so close as to draw them up; in cloudy days, when the sun is not out, they are far better without any covering at all. They must also be protected from wet, which would soon spoil their flowers altogether. When the bloom is over, at least so far advanced as to be no longer wanted, the covering must be taken off altogether, and the plants may have all the rain that may come, at least for two or three weeks.

When the leaves have turned yellow, it is a proper time to take up the tubers. They should be dried in the sun, and then put away in bags or boxes. It is, however, still better to have drawers or boxes made with partitions, like those for tulips, and let them dry in these before they are put away; when they are thoroughly dry, the drawers may be put into their places, and all that is then required, is occasionally to examine them, to see that there is no mildew nor mouldiness about them, for that would soon destroy their vitality, and they would become rotten long before planting time came again.

CULTIVATION OF THE LETTUCE.—Mr. Forsyth, gardener to the Earl of Shrewsbury, at Alton Towers, tells us that in that country *boiled* lettuce is a common dish, and recommends an improved mode of cultivation, by which four crops a year shall be regularly secured. He says:—Any lettuce will grow freely in the open garden after the 22nd of March. In very rich garden soil four seeds in a square foot are sufficient. Three crops a summer off the same land may be easily got; and if persons will go to the expense or trouble of transplanting lettuce, many crops may be had, and as four will grow upon a square foot, and weigh, when young, half a pound each, every square yard of soil will produce, in the three crops and the season, half a hundred-weight, which is fifteen hundred-weight to the pole of ground, or one hundred and twenty tons to the acre.

CULTIVATION OF THE CACTUS.

These singular-looking plants grow on the summit of the mountains of Brazil, in a poor, dry, stony soil, and exposed on every side to the cold breezes of the lofty regions they inhabit. The mammillarias and echino-cacti, forming the group called the porcupine cacti, grow in the valleys of the temperate regions, generally in a loamy soil, and amongst thick short grass, passing half their year in continual rain. The opuntia, sometimes called the prickly pear, and sometimes the Indian fig, is known by its flat oval leaves, or rather stems, and its prickly but eatable fruit; and it is always found on almost barren hills, growing in narrow chinks amongst rocks, where there does not appear sufficient soil to nourish a blade of grass. In some cases these plants grow nearly on the verge of a perpetual snow. The pareskias, which have leaves distinct from their stems, grow in similar situations, and require only a moderate degree of heat; but the male cacti and the rhipsales are only found in the hottest part of the tropics.

The compost that is used in the cultivation of the cacti is an equal quantity of light turfy loam, and pigeon's dung, and one-third sheep's dung, exposing the mixture one year to the influence of the summer sun and winter's frost to mellow; when wanted for use, one-third of sandy peat is added, in both cases mixing them well together. Some cultivators of the cactus make use of no other compost than very sandy loam, with a little peat earth and sand, increasing the strength of the compost as the plants proceed in their growth.

The young plants are grown in the forcing flower-house, from February to July, at a temperature of fifty-five to sixty degrees of Fahrenheit. They are then removed to a shelf in an airy situation in the greenhouse, exposed to the mid-day sun, giving them plenty of air and little water. The plants that are required to flower in the following September are placed in the forcing-house the first week in December, giving them very little water for the first ten days, and gradually increasing the water as the plant advances in growth. About the beginning of February, all the young shoots are stopped, which soon become well ripe; from this time the quantity of water is decreased, until they become quite dry, in order to throw the plants into a state of rest. In the beginning of March, they are replaced in a cold shady situation in the greenhouse, keeping them quite dry until the following June, when they are again put in the forcing-house, treating them as before.

For the plants which are to flower in August, they are placed in the forcing-house the first week in January, treating them the same as those for September, with this difference only, that they are put to rest a fortnight later in the greenhouse, and replaced in the forcing-house one week sooner.

The first flowering plants are put in the forcing-house at the end of January, and will come into flower about the middle of March; when these plants have done flowering, and are removed from the drawing-room or greenhouse, most of the old shoots that have flowered are pruned out, so that the plants are furnished regularly with young shoots for flowering the ensuing year; the plants are also placed in the forcing-house for ten days in order to ripen the young wood, and dry up the moisture, and are then put to rest in the greenhouse as usual. Such plants will flower a second time in October; other plants, put in the forcing-house in the middle of February, will flower about the end of April; if then pruned and dried and put to rest as before, they will flower a second time in November, and so on in proportion. They are re-potted at all seasons, whenever the plants may require it, always observing to keep the pots well drained with potsherds, in order that the manure may pass off readily. The process may be considered troublesome, but superior growth and abundance of flowers will repay the care bestowed. By the above treatment, the *cactus speciosus and Jenkinsoni* have been known to produce from ninety to a hundred fine expanded flowers at one year old, and at two years old the former bore two hundred flowers, and the latter one hundred and ninety-four.

In potting the plants, no matter of what kind, there is one principle, to which no exception must be allowed, and that is, that all plants whatever must have the soil in their pots rather dry than otherwise, and never to be potted, either when the soil about the roots, or that with which they are potted, is wet. There is another chief point, in which, in the successful cultivation of the cactus, nearly everything depends, that is, in rendering the soil in the pot as hard as it can be made; and if quite dry when used, there is nothing to be apprehended from making it too firm, if only the hand be employed in the consolidation of it. When the plants are in a dormant state, they are allowed to become dry, but when growing or flowering, the soil is kept constantly moist; but they must at no time be supplied so freely as to destroy the roots;

and this is a common case, and one of the reasons why large plants of this species are so seldom met with.

Most of the cacti may be easily increased by seed. In spring, when the fruit becomes shrivelled and dry, the seeds will then be ripened, so that they may be rubbed out, and sown in a pan filled with sharp white sand; or they may be sown in the pot in which the parent plant is growing; in this case, the soil must not be disturbed after sowing. There will usually be plenty of young plants spring up without further trouble; and when they have got to a proper size to remove, six or seven should be put into one pot, and allowed to stand one year; after that time they will be ready to remove singly into small pots; they may be plunged into a gentle hotbed during the summer.

EXPOSING GREENHOUSE PLANTS IN SUMMER.

Many greenhouse plants, and especially the more delicate kinds, often suffer much injury from exposure to the sun's rays in summer. When so exposed, without the benefit of sheltor of any kind, the soil is apt to become so thoroughly dried, that it is with difficulty again wetted, and hence the scorched and stunted-looking growth which may sometimes be seen on such plants in the summer season. The injury mostly arises, not from exposing the stem and branches of the plants, but from exposing the pot in which it is growing; the sun's rays acting on the pots, in conjunction with the evaporation constantly going on, soon deprives the soil of its moisture; and, as all the tender roots are usually more or less in contact with the inner surface of the pot, their injury is inevitable. It is no uncommon thing to see soil so much dried as to shrink quite away from the pot, and in this case, the roots cannot avoid being more or less injured. Under such circumstances, too, the water which is supplied sinks down as fast as it is poured on, and fails, for a long time, at least, to moisten the interior of the soil. Then, again, the necessity for constant watering caused by this exposure, is an evident waste of time. When plants are turned out-doors (and also when kept in-doors) their roots ought to be sheltered by some means from the influences alluded to; plunging the pots in some open, porous material, will answer the end as well as anything; and of the substances that may be employed, moss, coal ashes, rough peat, sawdust, or fine charcoal, are among the best that can be employed. It is desirable, also, to afford the entire plants a very thin shade, during the intense heat of summer, but the lighter the material employed the better.

Remedy for the Thrip.—Take a peck and a half of soot, and put it into a hogshead of soft water, keeping it well stirred every day, for ten days or a fortnight. This is strained through a fine sieve or piece of canvas, in a tub containing a peck of charcoal, and two or three lumps, or about three pounds of quick lime dropped in. In about two or three days it is strained again, and is then clear to syringe plants with. It will not only extirpate thrip, but many other troublesome insects, and is a famous liquor for syringing with, as it induces general vigour and healthiness amongst plants of all kinds.

Method of Freeing Trees from Moss and Insects.—The following will be found an excellent application for freeing trees of moss and insects. The mixture is made by taking five bushels of well-burnt lime fresh from the kiln, and slaking it with hot water in which salt has been dissolved. When the lime has fallen to a fine dry powder, add, by small quantities at a time, a bushel of soot, stirring it in till the two ingredients are completely incorporated. Advantage is taken of the first foggy day, when the trees are damp, but not dripping, to dust them over with this powder. One man may operate upon fifty trees in a day, and it should be repeated twice a year; the first time in March and the next in October and November.

Rotation of Crops.—The following have been laid down by eminent agriculturists as the principles upon which a judicious rotation of crops ought to be founded. 1st. Crops consisting of the same or similar species, ought not to follow in succession, but to return at as distant intervals as the case will admit. 2nd. Crops consisting of plants, whose mode of growth or cultivation tends to the production of weeds, ought not to follow in succession. 3rd. Crops whose culture admits of the destruction of weeds, ought to be cultivated when we cultivate plants which favour the production of weeds. 4th. Crops whose consumption returns to the soil a sufficient quantity of manure should be cultivated at intervals sufficient to maintain, or increase the fertility of the farm. 5th. When land is to be laid down to grass, it should be done when the soil is fertile and clean.

THE CHERRY.—*See page* 179.

CARNATIONS IN POTS.

We presume that the cultivator of carnations early in last month put those plants raised from the pipings and layers of last season into full-sized pots, in which they are to perfect their flowers: if this has not been done, let no time be lost. These pots should not be less than a foot in diameter at top. The roots of this plant are subject to injury from excessive damp; therefore, the pots should be well drained for them, and a sufficient quantity of mould prepared for potting them. Like all other plants which come under the above denomination, or which have attracted the attention of the florist, many soils have been recommended

Mr. Hogg, a first-rate cultivator of the carnation, gives the following as his practice.

Three barrows of loam, one and a half ditto of garden mould, ten ditto of horse-dung, one ditto of coarse sand; let them be mixed or thrown together in a heap or ridge, and turned two or three times in the winter; particularly in frosty weather, in order that it may be well incorporated. On a dry day towards the end of November, take a barrow of fresh lime, which, as soon as it is slacked, is strewn over it whilst hot in turning the heap; this accelerates the rotting of the fibrous particles in the loam, lightens the soil, and destroys the grubs, worms, and slugs. If there has been much rain during the winter, so that the strength of the compost is reduced, and the salts washed from it, seven pounds of damaged salt are taken, and added to the mass, either dissolved in water, or strewed over it with the hand. This from the experience of three years has been found to be attended with the most beneficial effects upon the future health and vigour of the plants. During the very heavy rains many florists cover the compost with tarpaulin or double mats, in order to prevent the nitrous particles from being washed out. This is also an excellent precaution. If any objection be started that the quantity of dung is too great in proportion to the loam, it may be said, that such an objection would be well founded if the compost were to be used immediately on its being mixed together, but as it has to be six months before it is used, it will be found that the quantity is not more than is necessary in order to insure a luxuriant growth and generous bloom.

Mr. Maddock, another celebrated florist, gives the following as his practice.

One-half rotten horse-dung, one year old, or that which has been used for a hotbed for cucumbers, melons, &c.; one-third of sound loamy earth; one-sixth of coarse sea or river sand; these ingredients are to be mixed together in autumn, and laid in a heap about two feet thick in an open exposure, and turned two or three times during winter, or otherwise the dung alone, after being used as a hotbed, may be thrown together in a heap in a conical form, in order to rot more perfectly, and as its surface freezes in winter, it should be pared off and laid on one side till the whole mass has been completely frozen through. This may be repeated as often as the season permits, and it will be completely fit for use in the following spring. The earth and sand may be added to it in March. When wanted to fresh pot the plants for bloom, the whole should be well mixed and incorporated, and passed through a coarse screen or sieve, in order to reduce its parts, and take out stones or any other extraneous substances which it may contain. In country places where the air is more pure, experience has pointed out the propriety of using less dung and more loam, the proportions of which, for such situations, may be reversed, viz., one half loamy earth, and one-third dung, and the sand as before specified. The preparation of the compost in other respects is to be exactly the same in all situations.

The pots and mould being prepared, the plants should be carefully taken out of the small pots in which they have stood the winter, or if they have not been potted, taken carefully out of the bed, into which they may have been pricked out last season, as soon as they were fully rooted, and separated from the parent plant. Let them now be placed in the pots already noticed, and gently watered as soon as potted. When a sufficient number are potted, let them be placed in an airy, dry situation, and defended in wet weather by mats or canvas covers, where they will remain until taken into the greenhouse, or placed upon a flower-stand to bloom. All that will be now necessary in their culture, till their flowers begin to open, or until the season of propagation arrives, will be to keep them regularly watered, and their flower stems neatly supported by sticks, in order to prevent them from being broken.

Those which may not be considered sufficiently valuable for potting, may be planted out in the borders of the flower garden, where they will come into flower in good perfection; and those which are considered border flowers, picotees, &c., should now be planted out in the borders of the flower garden, either singly, or in patches of three or four plants each; or they may be planted with good effect in beds, according to the style and size of the garden.

MANAGEMENT OF A SMALL GARDEN.

[MR. BRADY'S PLAN.]

It is not every cottager that has a garden, but he ought to have one, and he ought to know how to turn it to the best advantage; but this is seldom the case. We will, therefore, attempt to instruct him.

In the first place, let him divide his garden into eight beds or compartments, numbering them 1, 2, 3, 4, 5, 6, 7, 8, and we will begin with No. 1.

Plant in October early dwarf York cabbage, six inches apart, and two feet from row to row, and between those rows of cabbages, plant rows of Dutch brown lettuce. The lettuce will come off in February and March. The cabbages may be begun by pulling out every other one first, as greens, as soon as they are big enough, and will be all off in May. Plant the whole bed with potatoes in May, and they will be all off in October.

No. 2. bed. Plant or sow early magazan beans in November, and they will be off in June; but, as June is too late for potatoes, dig between the rows of beans in May, and plant potatoes, which will be growing without injury to the beans, a month before they are done with. When the beans are off, clear the ground, and earth up the potatoes, which will be off in October or November.

No. 3 bed. Large York cabbage to be planted in February, and off in June, and in June, plant Dutch cabbage, to be off in November. Lay rough dug or in ridges all winter.

No. 4 bed. Early onions planted from autumn sowings in February, and off in June. Plant drumhead or Dutch cabbage in July, and off in December.

No. 5 bed. Long-pod beans, to be planted in March. Dig between the rows in June, and plant cos lettuce, celery, and savoy cabbages, so placed as to leave the celery plenty of room; for which purpose the rows on each side any row of celery should be lettuce, as they are off in time to leave plenty of room for earthing. When the beans come off in August, clear the ground, and earth up the celery and savoys.

No. 6 bed. Early potatoes, planted in March.—Early in July dig between the rows, and plant savoy cabbage.

No. 7 bed. Onions, parsnips, and carrots succeeded by turnips, salads, and small seeds

No. 8 bed. Large York cabbage, planted in April.—In July sow turnips and leeks between.

Seeds.—Early York, savoy, and Dutch cabbage seeds which are sown in March, the plants may be transplanted in May. York and savoy seeds, sown in May, may be transplanted in July. York cabbage seeds sown in July, may be planted in October; and York, savoy, and Dutch cabbage seeds, sown in August, may be planted at any time from the beginning of February until May. When the leaves on the young plants are the breadth of half a crown or so, let them be thinned out, and put into a nursery bed. This not only affords more space to the weaker plants, but checks the too vigorous growth of the stronger plants, and prevents them from starting. In final transplanting, it is a good plan to make a puddle of fresh cow-dung into which to dip the roots. Celery seed might be sown in February, the plants thinned and pricked out in April, and finally transplanted in June. When the ground is prepared for final transplanting of cabbage, the best way is to have drills opened with a common drawing hoe about four inches deep. In these lines let the plants be carefully put in with a dibble. The reason for planting them in the deep lines or drills is, that the plants are partially shaded from the hot sun in summer, and sheltered from the cold blasts in winter. Besides, cabbage planted in this way needs no second moulding. In gathering the crops, particularly the earlier ones, when interlining is not necessary, and more especially the cabbage tribe, the best way is to begin at one end of the plot, and when a few lines are gathered, that part of the ground to be dug up, and the second crop so far commenced being put in, and so on until the first crop be entirely cleared away. By the time the last part of the first is away, the last part of the second or last crop will have been planted, and the first part of it almost ripe. This method is much better than cutting here and there. In all cases I would recommend, as soon as the last crop is cleared away, to have the ground trenched or laid up in ridges with the spade, so that as large a surface of it as possible may be exposed to the action of the weather.

Early Onions.—Let the seeds be sown about the middle of August. About three square yards of ground will be sufficient, and about a quarter of an ounce of seed. The plants are to remain in the seed bed until the middle of February, when they are to be transplanted in the following manner:—Let the ground be dug on the same day the young onions are to be planted; when the ground is ready, open drills six inches apart and three inches deep; let the plants be carefully taken from the seed bed and laid into the drills at about four inches asunder. Let each drill, as it is planted, be neatly covered in with the back of a garden rake, and the soil about the roots carefully settled with a little water. About the middle of May, some of them will start, that is, show their flower stem. As soon as this appears, let it be pinched off. Let them be well supplied with water in dry weather, and the bulbs will swell to a great size. By the latter end of June they will be ripe. Onions grown in this way will be ripe six weeks earlier than the onions of the spring sowing, and grow to a much larger size. The globe, and Tripoli varieties are the first for early sowing.

Leeks.—Let the seeds be sown in March; in July, let them be transplanted in drills, at six inches apart, and six inches deep. Let them be four inches from plant to plant, in the rows; let them remain so until spring, and they will grow to a large size.

Standard gooseberry trees may be planted round the borders, at four feet distance from the edge of the walks, and six feet asunder. They can be trained perpendicular, in a conical form, to any convenient height, from four to eight feet high, from one stem below. By training them in this way, they occupy but little surface, and produce the most abundant crop, and by watering them occasionally with liquid manure, they will, at the end of three years, yield from two to four gallons of gooseberries.

Strawberries may be planted as edgings along the walks, at about one foot from plant to plant. Let them be well watered in dry weather, until the fruit begins to colour, and no longer. The runners should be carefully cut away as they appear, and they will bear abundantly. They will require to be renewed every fourth year. It is a good time to plant strawberry plants in September, as they will produce a crop the succeeding year. It should always be borne in mind, that there is a considerable difference between the periods for planting, at the extreme points of west and north, even in this kingdom, and that no directions as to particular months can be perfect. The directions generally apply to the places round the metropolis, but very little observation will teach a man how much earlier or later he should conduct his operations. Generally speaking, he will only have to vary between the beginning and the end of the month.

ON DISBUDDING FLOWERING PLANTS.

The care bestowed on some kinds of fruit-trees, and the skill exhibited in their management, are quite remarkable, when contrasted with the indifference manifested to such expedients by the agents of floriculture.

There are two things in which the floriculturist would do well to imitate the fruit grower, and we shall here solicit attention to a very simple plan in use by the latter class which is productive of the most beneficial consequences, but which has not, as far as we can learn, been much, or scarcely ever, applied to flowering species.

Every experienced grower of peach, apricot, and nectarine trees is an advocate and a practitioner of the process of disbudding, going over them at stated periods, according to the lateness or earliness of the season, and removing carefully all those pushing buds that would appear to furnish unnecessary branches, or, in fact, such, as if left to perfect themselves, would have to be cut away in winter.

Now, the philosophy of this practice is obvious. By preventing the tree from developing superfluous shoots, its strength is clearly husbanded, and thrown into those branches that remain, and which are thereby rendered stouter and more robust, as well as better capable of bearing fine fruit, and equally vigorous new branches in the succeeding summer.

As a great stress has been lately laid on the advantage of stopping the young shoots of exotics, whilst in a progressing state, in order to make them additionally bushy, and, as in the case of plants that branch freely when so stopped, we have noticed the principle carried to an extreme, we deem it right here to suggest the means by which such a result may be obviated, and to show the desirableness of limiting the practice in particular instances. The mode by which we purpose accomplishing the reduction of shoots that are, from pruning and other causes, forming too numerously, is by disbudding in early spring, as is done with peach trees, &c.

The only plant on which we have seen the system adopted, and that but very sparingly and seldom, is the common garden hydrangea. This species is known to bear its rich cluster of flowers on the summits of the young shoots, and when these are desired to be particularly large, all the buds are abstracted from each stem, save one or two of the principal, as soon as they show themselves

These reserved buds are then encouraged to unfold themselves luxuriantly, by the aid of a mulching of manure on the soil, or by manure water, and thus the noble bunches of bloom met with in exhibitions are obtained. In this example, however, the principle is often carried further than is requisite for any other plant. One stem alone, from which all the buds are taken but a single strong one, is considered most likely to produce a first-rate show specimen; still, for ordinary greenhouse or pleasure ground objects, a large and healthy plant may be allowed to have many items, and to each of these two buds may be left to flower.

No one who has observed the effect of this method in the dydrangea will, we are sure, be disposed to question its extremely beneficial influence, since the contrast between a specimen thus judiciously treated, and one on which all the buds are suffered to open unchecked, is so strikingly marked, as to create the illusion which frequently occurs amongst the less observant regarding richly cultivated plants, that the two specimens were distinct varieties or different species. And the sole discrimination requisite in effecting the process is to adapt the treatment to the strength of the plant, leaving nearly as many shoots and buds on them as the specimen is calculated thoroughly to perfect.

If, therefore, the plan spoken of be so plainly beneficial in respect to hydrangeas, it follows that it must be alike useful to every plant partaking of their nature, and also in some modified form to all exotics which, naturally or otherwise, are inclined to bear a profusion of lateral shoots.

There is, then, a very handsome plant now in general cultivation, which approximates so nearly to the dydrangea in habit, that it cannot but be improved by being similarly disbudded, and this is the *Fuchsia fulgens*. Being deciduous, and the points of its branches withering every year, whilst the blossoms are borne in large clusters from the extremities of the annual shoots, it has mostly to be pruned down to a low bush each winter; in consequence of which, it sends out an abundance of laterals from the lower parts of all the branches. If these latterals be permitted to take their own course, many of them will be too weak to form flowers for themselves, and will, therefore, greatly enfeeble those which are capable of flowering, whilst at the same they accomplish no good purpose. Should they again be pruned off after they have been fully developed, the operation will be almost useless, as they will then have done all the injury they can do. Hence the proper way of avoiding their bad effects is to rub off their superfluous buds when they are first exhibited, as is done with hydrangeas, and to leave a certain number of the best buds, such as will most nearly accord with the strength of the plant.

When this direction is followed, the plants will not be in the least degree unnecessarily weakened, and each specimen will have six, eight, or more fine stout stems, with proportionately ample racemes of flowers, instead of a number of weak infertile branches, and scanty imperfect floral developments. In short, the aspect of the plant, in regard to its flowers, will be as much changed as that of the hydrangea.

Nor is the method adapted for application to *Fuchsia fulgens* alone. All those beautiful hybrids, of which that species is one of the parents, and which in any measure take after it by bearing their flowers towards the extremity of the branches, may be equally benefited by the same operation; and others, even the common kinds, whose flowers are axillary, might have the size of their blossoms very much increased, and the whole appearance of the plants altered for the better, by attention to them in the end of February or the beginning of March, divesting them of some of the numberless shoots which they throw out so prodigally. We have tried the plan on *Fuchsia globosa* with the most complete success, and besides making the whole plant and its inflorescence so much more luxuriant, it gives a control over its growth, which is of the highest use, for an elegant and regular specimen may thus be procured with certainty, whereas it would be quite the subject of chance, if altogether untended in this manner.

But there is a much more extensive class to which the process may be applied, including all those plants whose shoots are terminated by clusters of flowers, whether they be naturally prolific in side branches, or have been rendered so by artificial stopping; and it is in this place we must mention that the habit into which some excellent cultivators have passed, of frequently pinching or cutting off the summits of a plant's shoots, in order to induce bushiness, has led them to disregard a little extravagance, which sometimes results from the practice. We allude to the exuberant number of shoots that are occasionally emitted, the very number of which have a direct tendency to enfeeble the flowers; for, where there is an immense display of blossoms, there must necessarily be more or less imperfect. The preferable course, therefore, we conceive to be, the fostering only a moderate number of shoots, and so allowing the blossoms to be both sufficiently abundant and singularly fine.

Referring primarily to plants which bloom in terminal bunches, we yet take in those whose blossoms are more scattered and solitary. As an illustration of the former class, we shall instance the genus *Pimelea*. By checking the growing branches of some of the species, they are compelled to put forth a considerable abundance of laterals, and when they have once been brought into this peculiar branching condition, the shoots become so numerous and dense, as materially to lessen both the flower heads and the individual blossoms. *Pimelea spectabilis*, the noblest of the species, will well illustrate the circumstance. When it is slightly pruned in the summer, it forms so many young shoots, that unless a few of these be taken away, the clusters of flowers are very much diminished. But if the buds which would have constituted laterals be judiciously thinned, just as they are about to burst, there will be a far more attractive display of splendid bunches of bloom, and the specimen will have altogether a much neater aspect.

The same remarks apply quite as fitly to *Pimelea sylvestris hypericina*, and others of similar habitude. Even *Pimelea decussata*, beautiful as it is, when so thoroughly covered with its pink inflorescence, would, we think, be far handsomer if it had fewer and larger heads of bloom; and this might easily be brought about by destroying a portion of the young shoots as soon as they issue from the bud.

Ixoras furnish another very favourable exemplification of the plant now under our discussion. Those who cultivate them most successfully take care to prune them vigorously, in order that they may never get larger than mere bushes, and may send out lateral shoots enough to make the production of flowers ample. As a consequence of this pruning, they yearly generate an augmented supply of side shoots, which soon get so numerous that they hinder the leading ones from flowering finely. Those, then, we would have examined, when the buds were on the point of expanding, and all but those which are intended to flower, with two or three to give an added verdure and compactness to the plant, should be taken off entirely; more magnificent bunches of bloom would thus be unquestionably secured.

Sesianthus Russellianus is another plant which in certain states requires to be disbudded. After having bloomed once, or having been broken down, if deterred from seeding, it will send out a number of long laterals, which, unless thinned immediately on their appearance, will not more than half or a third of them bloom, and the rest will be very seriously impoverished. But should some of the buds which are the least promising, or are in positions where they can well be spared, be removed at first, the plant will grow and flower with unwonted energy and richness.

After all, the cases which we have selected are merely illustrative of a system which may comprise a vast multitude of plants of all classes, whatever may be the mode in which their inflorescence is arranged. This system is for the most part necessary only where some kind of pruning is pursued, and it is for that pruning that we seek to substitute it wherever practicable, because it saves some little time and a very large amount of the plant's strength and beauty. Geraniums, many kinds of climbers, and all plants which through culture grow too dense, or bear too many branches to flower perfectly, may be most appropriately subjected to it. Indeed, we do not know of any exotic that is the object of artificial treatment to promote bushiness, which may not at some period or another need such assistance.

Beyond its usefulness, however, in reference to these specimens which want their side branches thinning lest they get too weak or crowded, we are anxious especially to exhibit its advantages in regard to such as it is wished to make more bushy. Practised on the terminal buds of young plants, it would have all the effect of stopping their shoots, whilst at the same time it spared them the needless expansion of those shoots. There are many plants grown in greenhouses and stoves, which, like those in the open air, finish their summer's enlargement by forming a bud at the end of their stems or branches, and those which do not grow thus fold up their leaves into a sort of half-expanded bud. In either instance, the bud or point could be plucked out carefully, directly the sap was set in motion, in the spring, or the heart of the young shoot could be abstracted as soon as the bud began to develop. This, though a novel, would certainly be a valuable application of the principle, since by its means the time and energy wasted on the elongation of the shoot before it would generally be stopped, might in this way be entirely saved. The plan is, moreover, superior to winter pruning, in that the stopping of a soft growing shoot is at once a means of eliciting laterals, whilst the process of development is much more tardy when an old, hard, and dormant branch is severed.

There is still another group of plants, in which the system may be practised serviceably, and that is such tuberous-rooted herbaceous species, as gesneras and dahlias. The number of stems which plants of this character will throw up is always manifest at the time of potting or planting, or very speedily afterwards; and duly estimating the capacities of the plants, if just such a number of stems be then left as will flower liberally, and the buds or eyes of the rest cut out, fine and healthy specimens will be obtained. With respect to dahlias, one good stem will always suffice. In gesneras, three or four may be preserved as the state of the specimen may determine, and other kinds can be treated accordingly.

Again, in forcing roses, or any shrubs, that have been liberally pruned, and which are not destined for show, but simply to supply flowers for bouquets, however closely the shoots may have been cut in, there will sometimes be buds which give early signs of unfolding themselves badly, and which may then indicate that they will form nothing but starved shoots, wholly destitute of flowers. On these the operation of disbudding can be further employed, for if they be timely removed, the other flowering shoots will necessarily receive the extra nourishment which they would have expended.

Finally, there are plants which, from their nature, or from fancy, or for particular purposes, or because they display themselves better in that manner, have to be treated as standard shrubs, that are prepared with more or less tall bare stems, and a bushy upright expansive, drooping head. To train the stems of these merely requires much and repeated pruning, but we wish to apply to them the more rapid and suitable process of disbudding. Let the buds be removed, ere they have lengthened into branches, and the plants will sooner attain the desired altitude, as well as require a greater degree of robustness.

In order to put in practice the plan we have now been suggesting, we would recommend the use of a very small sharp knife, instead of the hand. If buds be rubbed off by the finger or thumb, the operation is frequently ineffectual, and the bark of the plant is commonly injured. When it is done with a suitable knife, however, the entire substance of the bud can be cut off, without at all damaging the shrub or root from which it is taken.

We hope we have therein said enough to demonstrate the superiority of disbudding to pruning, and that whenever the former can be effected, in will in future be the ordinary method pursued with all exotic plants.

MANAGEMENT OF CUTTINGS.

For the Flower, Fruit, and Kitchen Garden.

Cuttings are slips cut from the mother plant for the purpose of setting, in order that they may make roots, and form young plants. A small house should be devoted to their propagation, but if this cannot be obtained, a frame may be used, situated so as only to have the morning sun; otherwise, shading with bunting or mats will be requisite or necessary. Those cuttings requiring heat should be plunged in a bed of tan, or placed in a hotbed. Cuttings of woody plants take root best in fine silver sand, for they strike more freely in it, and are safer to pot off after being rooted, since the sand shakes clean from their roots, and this is not the case where they have been planted in mould. But as some of the soft-wooded kinds will not strike well in sand, they must be planted in fine mould. In making cuttings, no leaves should be taken off or shortened, except in that part which is to be buried in the mould or sand, where they should be cut off as close to the stem as possible. The more leaves there are on a cutting, the sooner it will strike or take root, and the more shallow they are planted the better; but they must be well fastened in the mould or sand. The pots in which they are planted should be well drained with potshords, and kept rather moist, but not too much, or else they will damp off; and the hand or bell glasses, with which they are covered, should be taken off and wiped every morning. When the cuttings are rooted, and have been potted off, they require to be placed in a frame for a few days, and shaded; after this they should be hardened by degrees. In procuring loam and peat for potting plants, the top spit is always the best, and is to be preferred with the turf upon it, and as fresh as possible. When peat cannot be obtained, decayed leaves or wood may be substituted. The lighter and more sandy the loam is the better, as it will require less peat and sand to be mixed with it. A certain quantity of sand is always a proper ingredient in mould intended to be used in potting or shifting plants. T. C. M.

Red Spider in Cucumber Frames.—A safe cure for red spider in cucumber frames, is to keep them very moist, with a strong heat, to water them at twelve o'clock in the day, and shut them up, and mat them over, so that the sun will not burn them.

The Gooseberry Caterpillar.—Sprigs of broom entwined round the branches of gooseberry and other branches, put an effectual stop to the destructive operations of the caterpillar. The above have been tried with success in some gardens in Sutherlandshire.

The Daisy.—How few persons even know the variety which distinguishes this humble class of flowers. Their cheapness is somewhat against them, it is true ; but if any gardener would take the trouble to get all the leading varieties, and plant them about in patches, in the common borders, they would be found objects of much greater interest than many give them credit for. The flowers come out among the earliest of the spring, and the colours, which vary from pure white to very deep crimson, render a border planted with daises, in good proportion to the crocus, snowdrop, daffodil, primrose, and similar early flowers, much more effective than anybody who has not seen it can imagine. The quilled white, quilled crimson, and double pink, are very distinct and beautiful varieties.

Thinning out Peas.—The principle of thinning crops as one means towards securing perfect growth is, indeed, commonly recognised, but too seldom acted on. In no culinary crop, perhaps, is this remark so well illustrated as in the case of garden peas. If we look at a crop of peas when they are just vegetating, we shall, in almost every case, see the plants standing thickly together, forming then, in their embryo state, an unbroken line. And they are generally allowed to grow on without any alteration in this respect. In nine cases out of ten, two-thirds —often more—of the seed sown is wasted, and the crops should be kept thin, both by sowing fewer seed than is usual, and subsequently thinning out the plants if necessary, so that the plants may stand clear of each other; the larger varieties may be thinned to three or four inches apart, the smaller ones to two inches. The plants, too, instead of being allowed to run up to a great height, should be topped once or twice to make them bushy. If these two points of practice were attended to in conjunction with each other, the pea crops would be found to furnish successive supplies in much better condition than is now often found to be the case.

Destruction of Aphides.—The different kinds of aphides or plant louse are very troublesome. Such plants as calceolarias, cinerarias, pelargoniums, &c., suffer much injury from the green fly, if they be not speedily dislodged, and other kinds attack out-door crops. For in-doors or wherever the smoke can be confined, fumigation with tobacco is the best plan of destroying them, and a calm evening is best suited for the operation. The houses or other places are to be closed, and then filled with the smoke, and next day the plants should be syringed with clean water. The tobacco should be laid over a few red hot cinders in the bottom of a flower-pot, and then covered over with a good thickness of *damp* short hay, the pot being elevated upon two bricks, so that the draught of air may reach the hole at the bottom. In places where the smoke is offensive, and generally out of doors, the plants may be well syringed towards evening, in the liquid made by adding to the tobacco liquor of the shops, four times its bulk in water; in the morning, this is to be syringed off with clean water; whichever remedy is adopted, it is safest to have it repeated once or twice within a day or two.

Fertilising Cucumbers.—It is not only unnecessary to fertilise the blossoms of cucumbers, as far as the growing of fruits fit for the table is concerned, but positively detrimental where fine and symmetrical fruit is required. This admits of explanation. When the blossom is fertilised, the young ovules (future seeds) begin to form their embryo, and as all the ovules in the fruit are seldom or never influenced in this way, those which are influenced, when they begin to grow, cause the fruit to swell equally, thus producing an unsymmetrical outline. But though the fruit, as a horticultural production, will come to maturity without the fertilisation of the ovary having been effected, yet the seeds of such plants will be abortive ; consequently, when fertile seed is required, it is necessary to have recourse to fertilisation. In the case of unfertilised fruit, too, the blossoms remain expanded much longer than when the fertilisation has been effected, and this is a point of importance to exhibitors. The object in growing cucumbers, whether for show or use, being not to produce seed, but long handsome fruit, it follows that the contact of the pollen with the stigma should be prevented, for in preventing this, we prevent the rapid decay of the flowers, and take away the check to longitudinal extension, and the tendency to unequal lateral protuberation.

JULY.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN JULY.

TULIPS.—Take up the roots, if not already done, and manage them as directed in last month's number.

DAHLIAS.—Tie the branches as often as they will reach the stakes; they are now beginning to enlarge, and the wind will have more power over them, particularly so in wet weather.

CARNATIONS AND PICOTEES —Carefully tie up the blooming stems as they advance in growth, and if not already top-dressed with manure, it should be immediately attended to. Keep them clear of weeds, the surface of the soil open, and supply them liberally with water.

AURICULAS are now in a dormant state, the spring foliage is fast decaying. The green fly (common aphis) attacks them in numbers, as also the smaller kinds of caterpillar. Clear them of these pests as directed in last month's number. Pick off decayed foliage as often as it makes its appearance. Move the surface of the soil round the necks of the plants, and water sparingly. The same attention will be necessary with the polyanthuses.

INOCULATE AND LAY VARIOUS SHRUBS.—Inoculate roses. This is to be understood principally of the curious kinds. The budding is to be performed upon stocks, raised from common kinds, or on stocks of the common dog rose. In budding roses, one precaution is to be observed, namely, that it be not done too soon, because the buds are apt to shoot in the autumn, and thereby suffer from frost in the winter. Some sorts of roses which do not produce suckers may also be propagated by layers, which should be layered in the autumn season, or some of the same year's shoots may be layered at midsummer, and the beginning of this month, and they will sometimes be rooted by Michaelmas.

PLANT CUTTINGS, &c., OF SUCCULENT PLANTS.—This is a proper time to plant cuttings and slips of most kinds of succulent plants. The method of propagating these kinds of plants is easy enough. It is done principally by cuttings, and the management is as follows:—In the first place it will be proper to observe that the cuttings of many of these kinds of plants, being extremely full of sap, require, when separated from the parent, to be laid for a few days on a dry shelf in the house, until the moisture is exhaled from the fresh wound, so that there may not be any part of the cutting rotten when put into the soil; and in order to prevent this, the earth that they are first placed in should be a dry mixture of sand and lime rubbish, as most congenial to their succulent nature. After being dried, these cuttings are successfully potted in dry exhausted bark, or leaf mould, and afterwards potted.

JESSAMINES.—Jessamines of some particular sorts being propagated principally by budding, such as the Italian and other curious kinds, it may be performed any time this month: the common white jessamine is the proper stock upon which to bud most of the sorts.

GREENHOUSE PLANTS.—The greenhouse plants, wherever placed, should be regularly looked to, as regards air, shading, watering, and more particularly training, as no after-pruning, tying in, or other resource, will be found so effective in forming a neat and regular plant as a little attention during the growing season to stopping and judicious staking. Greenhouse hard-wooded plants may be kept and grown better in cool pits during the summer than in any other situation. They should be shaded from intense sun-heat, and a circulation of air through the bottom of the pits about the pots should be secured. The free-growing and soft-wooded plants may be grown wherever there is plenty of air and light, and the auxiliary of shading from the scorching rays of the sun

It is scarcely material at this season whether these conditions be supplied to them out of doors, or in frames and pits, or houses with the lights partially or wholly removed. The greenhouse and conservatory should be kept gay by a succession of plants in bloom, and these ought now to be frequently changed and renewed.

GERANIUMS should now be cut back to three or four eyes, and the cuttings struck. They should be struck under a common hand-glass, in a shady border of rich, light soil. Be sure you cut them up to a joint or eye, which may be found at every leaf, so that if you cut to a place close under where a leaf was, you are sure of being right. Some of the bottom leaves should, however, be pulled off.

PANSIES.—The side shoots may be struck under a hand-glass in a shady border, and those already struck may be planted out where they are to bloom. Top-dressing the plants will greatly encourage the size. Those blooming for the shows should be shaded from the heat of the morning sun.

GENERAL DIRECTIONS FOR THE FLOWER GARDEN.— Propagate extensively for next year's supply. Sow the seeds of biennial and perennial flowering plants. Propagate double rockets, double sweet-williams, mule pinks, pansies, and such like plants, by cuttings and slips. Carefully preserve the dried roots of bulbous plants until the planting season returns. Camellias should be attended to as the buds appear; keep them only moderately moist and shaded. Also, calceolarias, unless such plants as are seedlings; these should have as much sun as possible. In the modern flower garden, plant out duplicates to fill vacancies; peg down diffuse growing, and tie up erect growing plants; water liberally and frequently; examine and remove dead leaves and stones. The amateur would derive much advantage from making a careful note of the exact height and colours of the summer flowering plants which he cultivates, as well as of those which he may intend to add to his selection; this information will be found to be particularly useful at planting time next year, and there is some satisfaction turning our own observations to account. In the flower garden, the most gorgeous time is approaching. The beds being perfectly filled for the summer, the utmost attention must be paid to neatness and high keeping, without which, the best selection of plants will look badly and poor. But if keeping be all that is necessary in the flower garden itself, not a moment should be lost in propagating for another season. To this end cuttings should be continually put in and trained, and perennial seeds repeatedly sown. Now also is the time to see the effect of any arrangement of colours adhered to in the planting, and to note any desirable alterations for another season.

SECOND WEEK IN JULY.

AURICULAS are now in a dormant state, but still require the florist's attention; they must be kept moderately watered, and cleansed of decayed leaves and weeds; shading them during the heat of the day is also necessary.

PINKS.—Continue making stock, by piping as often as any cuttings are ready; shade the glasses with pipings under them, in the middle of the day, if your beds are exposed to the power of the sun.

CARNATIONS AND PICOTEES will now occupy the attention of amateurs; tying them as often as they require, and reducing the number of pods, must be attended to. Those varieties that produce small or thin flowers may be podded up to one or two—as you may fancy; examine the topmost bud, and see if it be perfect; if not, take it away, and leave the second in its place. Some varieties produce exceedingly large and well-formed pods, yet there is often difficulty in blooming them whole. The pods, therefore, should not be taken away too early; it is better to do it gradually: waiting till you see the nose of the first blossom is safely out of the flower-cup, when if you do not require any more blooms from the same stem, you may take away the remaining pods, for two or three should be left on till the flower is safe. There are also many varieties that have short, thick, and ill-formed pods, and are very difficult to flower fit for show. With these, still greater care will be required, as to the general reduction of the buds, and also the tying, &c., these latter varieties requiring two, and occasionally three ties, to secure them from bursting. The young florist must here exercise a little of his own judgment, for it is not possible to anticipate every circumstance that may require notice; by a little practical and close attention, he will soon acquire the method of managing these flowers. In tying the pods, care should be taken to fix the bass above what is called the sub-calyx, which is the small scales growing immediately on the top of the bloom stem, under the shoulder of the pod or flower; for if the flower-cup be split down to the sub-calyx, the bloom will be rendered unfit for exhibition. Keep the pots clear of weeds and well supplied with water. Weak liquid manure may now be applied.

Dahlias.—Continue to tie up and protect dahlias, as recommended last week. Should the weather prove wet, and attended with high wind, great damage will accrue if the tying be neglected.

General Directions.—Take up, without delay, all tuberous roots, as anemones and ranunculuses, also tulips, &c., and let their places be immediately filled with annuals, cultivated in pots, such as stocks, &c. Water all newly-planted flowers; a second bloom may be obtained from several kinds of plants and flowers which bloom at this season by a judicious thinning or pruning back. We may mention the early sort of roses, althea frutex, most perennials, and many annuals. Of the latter, a reserve should always be kept in pots, ready for turning out whenever they may be required. Attend to staking and tying up any plant that requires it. Greenhouse plants in the open air should have a liberal supply of water. In placing them, some regard should be had to their native habitat. Thus, New Holland and Cape plants usually succeed under the same treatment, and yet a strongly marked difference exists between them and others, called also greenhouse plants, and by this attention to geographical arrangement much trouble will be spared the cultivator too obvious to need mentioning. Persevere with the mowing and other mechanical minutiæ of the garden. Continue to propagate herbaceous and shrubby plants by layers, cuttings, slips, and budding. Have everything that is to be planted out done as soon as possible.

Alpine Plants.—Examine and cut away the dead flower stalks, and clear them from all weeds. Pay particular attention to the drainage—let it be complete, and let their situation be in the most shady part of the garden. If there be any particularly noted for rarity, beauty, or curiosity, propagate them to their full extent, for they add greatly to the beauty of a garden. Those that have died away should be kept perfectly dry, and their growth would be considerably promoted by a slight top-dressing. Some discrimination must be used in regard to the watering of those which are growing, and those which have arrived at maturity. The largest supply must, of course, be given to the former.

Annuals.—The annuals which are sown now must be in a good situation, so that they may flower this season. This is a good time to sow mignionette and stock, so that they may flower in pots through the early part of the winter. Those which are past their flowering state must be removed, and their vacancies filled by others, or some particular plants which are ready to flower. Such as are planted out of pots, should have the balls of earth a little loosened, and supplied with a thorough watering.

Chrysanthemums. — This is a proper season for making new plants of this beautiful autumnal flower. This is done by either dividing them at the roots, or taking off the strongest tops of the shoots about three inches in length, and planting them in small pots, and plunging them into a little heat. It is a plant which is easily struck, and, when it has taken place, the plants should be gradually hardened off, and placed in a warm sunny situation, if possible, plunging the pots. They should, as well as the standard plants, have a liberal supply of water, and once a week liquid manure may be applied.

Cacti and other succulents not in flower should have a full exposure to the light, and sun and air. Climbers and free growing plants should be pruned, thinned, and tied in their most natural positions.

Half-hardy Plants, such as petunias, verbenas, &c., should be propagated as fast as cuttings can be procured, especially of any new sorts, or those on which a particular value is placed. Those which are intended for forcing, as geraniums, heliotropes, calceolarias, should be expedited in their growth, and be kept regularly stopped, so as to form bushy heads as well as to prevent their flowering; keep them regularly shifted until they be in the required sized pot, and let them be well shaded as soon as the sun acts powerfully, especially when fresh shifted.

Fuchsias.—Regulate them as they advance in growth, and water them copiously; for if they get too dry, they will shed the greater part of their flowers and leaves. Liquid manure may be occasionally used. The plants should be shifted when the pots get too full of roots.

Geraniums.—Those which are out of bloom should be cut down to within a few eyes of the old wood, and placed in a hot situation, fully exposed to the sun. Water them sparingly, so as not to excite them into renewed growth, but to enable them thoroughly to ripen the wood, previously to preparing them for the next season.

Roses.—Keep the old flowers cut off as they decay, and prune back the old flowering branches to the new shoot or bud, from which the next flower will proceed. Many of the more delicate and fine French roses are apt to die at the points of the shoots, when pruned in winter, or early in spring. In order to remedy this evil, a second pruning of the tender shoots should now be performed, or when the flowers fade. In the same manner as in winter pruning, all dead and decayed wood should be cut out, and those shoots which have done flowering should be shortened back to a healthy strong bud; but those buds which have not yet flowered may be kept unshortened till the end of September or the beginning of October. Some prune all their best roses at this time, and their common sorts in winter in the usual way.

Mignionette.—The most successful cultivators of this plant sow the seed at different times, and, from the result of long experience, they regulate the times of sowing to correspond with the time they expect a demand for it. In order to obtain plants in bloom during January and February, they sow in the open ground about the middle of this month, sowing the seed then that the plant may be stocky. By the middle of September these plants will be fit for potting. They choose pots of various sizes. Those of the sort called thirty-two are the most convenient. Into these pots they put from eight to ten plants, thinning them out afterwards, should they be too thick. The mould of which they make use is rather light and porous, admitting the water to pass freely through it. After potting the plants, they are placed in a cold pit or frame, until they have fully established themselves. A second crop is sown not later than the 25th August, which comes into perfection in March. April and May mignionette luxuriates in liquid manure, whether prepared from guano, pigeon's dung, or the stable yard. Water only at the roots.

Myrtles, and other evergreens, should be freely watered, especially if much exposed to the sun. Syringe them often, so as to keep the leaves free from dust.

Violets.—Those planted out for potting in autumn should be well watered in dry weather. Encourage the plants by stirring, and in some cases renewing the surface soil. Look often after them, keep them clear of weeds, and prefer a shady and moist treatment.

Jessamines, Honeysuckles, and all fast-growing climbing plants, should now be looked over, pruned, and nailed in, or tied up, as the case may be.

Hollyhocks must be thinned, and have long and strong stakes put to them. Their grandeur will be enhanced by giving them clear liquid manure once a week.

Primulas.—Sift as the plants require it, keeping them in a cool place, shaded from the direct rays of the sun. Water freely.

THIRD WEEK IN JULY.

Auriculas must be shaded during the middle of the day, and otherwise attended to as directed in last month's number.

Pinks.—Prepare some ground for planting out the rooted pipings, they will soon require your attention; but if the weather should be too hot, we recommend you not to commence till we have some rain, unless compelled for want of room. In this case, well saturate your prepared beds with water three or four hours before you commence planting out; this will give the soil time to get mellow and fit to receive the tender roots of the young plants. Those who have not finished their work, should not lose any time, particularly with the scarce or valuable sorts. Watering and shading the piping-glasses will be still required, and must be attended to as before directed.

Carnations.—The excessive heat of the weather does not favour the flowering of these plants; it forces them into bloom prematurely, diminutive in size, and of short duration. To the young florist, we would recommend his attention to the seeding of a few of the greatest favourites, or those which, from their form or colours, his taste leads him to suppose are likely to produce superior varieties. One thing that should be observed in crossing these flowers for seed, is, not to mix the colours; it should be scarlet edge with scarlet edge, and purple with purple, &c., for if they be crossed in colour they are apt to produce varieties, called bizarres, which is a mixture of two colours on the margin of the petals, instead of being only one, and though these flowers are very beautiful, they are objected to by the florist, and are not allowed to be exhibited in stands for prizes. This is certainly an error in taste, and while it exists, will be a bar to the culture and improvement of these very desirable varieties. Carnations and picotees, under the oppressive heat of the weather, will require more than ordinary attention in shading, particularly so if the tulip awning is not in use; double covering on the glasses, with calico, rhubarb, or cabbage leaves, will be found a great protection; they must be copiously supplied with water, and also the paths and ground around them kept continually wet. Pipings of carnations and picotees may still be taken, but they will not make such strong plants as those taken last month; it will be advisable to make a few, however late; it often insures the saving of a stock of some expensive sort, that would otherwise be lost through disease in the layers.

Dahlias.—The thrip is already making its appearance, as also the black fly: syringing the plants with weak soap-suds or tobacco water, in the evening, occasionally, will reduce them, and, probably destroy the pest, if taken in time, and rid the garden for the season. Continue to tie them up, &c., as observed in the last number.

Annuals sown in the open ground for planting out may be used for filling up blank spaces in beds and borders, as they will bloom well late in the season. China asters, marigolds, stocks, &c., will keep up a succession of flowers until cut off by the frosts. Balsams, and many other subjects sown late or stunted or repotted all at this time, assist greatly in the decoration of gardens. Tie up all the long straggling plants and flowers that require it, such as sweet peas, tropœolums, and dolphineums; almost any sort may be still sown to bloom late, and through the winter in pots, under protection. Mignionette, stocks, sweet peas, and many others will grow well in pots, and flower in the winter time in the conservatory or greenhouse.

Potted Plants of all kinds out of doors must be well watered in hot weather, because a few hours sun, when the soil is not kept moist, heats the pot, and kills the fibres next to it. Annuals, to be perfected in pots, should be shifted. The neglect of properly watering plants in pots that are set out in the ground, is one of the most prolific sources of mischief. Few people consider, and we cannot mention it too often, that a plant may stand out in six hours' rain without being any the less entitled to the use of the watering-pot. Many tall and bushy plants completely repel every drop of water from the pots, to which, in fact, they are a roof of leaves. We have seen many individuals calling themselves florists who are utterly careless of such matters, and we have known many magnificent plants damaged, and some killed, before the evil was discovered; indeed there are many which had better be killed out of the way than spoiled; for it is only a temptation to retain old scrubs that are a discredit to the collection to which they belong. Let any one at all accustomed to study the habits of plants remember for what a number of hours the ground under some trees remains dry, and they may then well conceive that those plants which are in proportion more bushy than trees in general will effectually throw off every drop from the pot.

Pansies may be continually propagated, and especially from young side shoots, which make the best plants; any that have done blooming may be cut down pretty close, and earthed up, even some may be put amongst the stalks which may be nearly covered; these should be well watered, because it will induce shoots from the root, and most of them will be rooted plants. The old stock being parted, will give many fit to plant out at once. The best of the branches taken off by cutting down the plant may be selected, cut up to a point, and planted under a glass in the shade. New beds may be made with struck cuttings, being prepared with a good dressing of leaf mould or dung rolled to mould. Shade flowering plants or blooms intended for show.

Biennials and Perennials may be sown, if not done last month; for they will, if planted out as soon as they are large enough, get strength enough to bloom next season, which is all that is required of most of them; any sown last month may be planted out.

Autumnal Flowers, such as the colchicums, winter aconites, amaryllis lutea, autumnal crocuses, Christmas rose, and some others, or any autumn and winter blooming plants, may be planted if not done before.

Geraniums that have been blooming may be cut back almost to the middle stump, and all the cuttings be placed in the open sun under a hand-glass. Those from which seed is being saved, and others not yet done blooming, may be placed in the conservatory or in the open air. The cuttings from greenhouse plants may now be struck freely, others with a trifling bottom heat, or in the greenhouse, but the former is the better. The seedlings of geraniums which are blooming should be examined, and all that have not some recommendation should be thrown away. Those only should be kept that have some very good points. The petal should be very thick, the colour very novel, the flower very round, the edge very smooth, or the bottom petal very wide, for this latter quality is scarce, and the absence of it frequently the only drawback to an otherwise good flower. Still, any one of the points good in a remarkable degree ought to save a seedling, not for its value as a variety, but as a subject from which to sow seed.

Chrysanthemums.—Take off top cuttings and strike them under a hand-glass, with careful shading from the hot sun, as these cuttings will make neat dwarf plants for potting or blooming in the borders. This is the only way to get dwarf plants, for by this time most of the sorts have got up eighteen inches, and if left alone till they bloom would be a foot higher. The old stocks may be turned out in the borders to make shoots and bloom there.

Dahlias.—At this season the watering of the dahlia should be effectual, but not oftener than it is absolutely requisite; it should be done after the seed is sown, and all over the foliage, as well as all over the piece of ground they occupy, soaking it as completely as if it were a heavy rain, and not repeating it afterwards for days. The plan of watering at the root of the plant, and nowhere else, and of repeating this frequently, is altogether bad; it leads to sudden alterations of wet and dry, causes insects to be more abundant, and in a very dry season gives a check which the plant feels the whole season, or at least till the longer and more dewy nights of autumn come to their aid. Let the numerous plans for destroying thrips and earwigs be now put into requisition; put small pots on thin stakes, put reeds, bean stalks, and other tubular contrivances, all about the plant while it is small, in order that those pests may be got rid of whilst the plants are young. It is of the most vital importance that they be got rid of before the flowers come to harbour and feed them, for they will completely destroy every blossom on the plant. Those who have been in the habit of mulching their dahlias have found that watering through the day has been of use; but there is a great evil in mulching: the dung about the roots forms such a harbour for vermin, that it becomes soon difficult to keep either the earwigs or the thrip at all under. Again, any sort of covering about the ground encourages the fibres of the roots to come to the surface, and it will be seen towards the height of the bloom, on removing the litter, the fibres will have come to the top of the ground. Of course, if the dry weather once caused these fibres to die, the plant would receive a check not easily got over. All plants are the better for going down a little after moisture; for this reason, all partial waterings are bad. Dahlias should be well syringed over their foliage after the sun is down; it is of great service. All superfluous branches should be cut off; and, indeed, they may be trained to a single stem to the height of a foot or fifteen inches, with advantage. This may be considered the principal part of summer culture. Sufficient instructions have been already given for tying and staking them.

Polyanthuses may be parted and planted out for increase, but show flowers will hardly grow large enough by the autumn, unless parted at the beginning of the month.

Verbenas, Silvias, Heliotropes, Petunias, and other potted plants, may be put out in the borders, wherever there is space, and early flowers that are done blooming should be removed or cut down to make room and leave the place more neat.

Fuchsias in pots may be either plunged or planted out, and the beds and borders should be finished off every few days; for the decayed annuals, and other declining flowers, render this necessary.

Begonias will require a considerable supply of moisture in dry weather; but, it should drain freely from the pot. Stake and train out as necessary.

Camellias will now have set their blooms, and may be inarched. It is done by cutting a stock, which is generally a single camellia, or some other of little use, one third away on one side, in order to make a flat side to the stem; then cut the branch of one you wish to graft, so that the two flat sides will make a tolerably even join; then cut a gash very carefully in the middle of each flat side, downwards in the one, and upwards in the other, as nearly alike as possible, tucking the tongues thus formed into the gashes of each other. This simply makes the join stronger. These plants are necessarily placed close together, and bound together at the place. In six weeks or two months the union takes place, when the piece grafted on the stock is separated from its plant and remains on the stock, and all the growing part of the stock is cut off, so as to leave the newly grafted branch the only head. The advantage of this method is, that you may select a branch for inarching that has a number of blooms set, so that the very first year the camellia will be a blooming plant. The camellias that have perfected their growth, must be placed where they will ripen their wood, without being excited to grow. They must be placed, therefore, in a cool and rather sheltered place, and no place better than the north side of the wall, but where there is abundance of air, and some shelter from the worst rains.

The Lawn.—The lawn will now require frequent mowing. Straggling branches of flowering and evergreen shrubs must be cut back, box edgings clipped, weeds removed, gravel walks rolled after rain, rose, and other staked trees examined, to see they are secure, climbing plants fastened as their shoots grow, and all the dead and decaying flower-heads removed from plants. Fancy shrubs and

American plants, whose seed pods should now be allowed to swell, should be literally soaked with water every few days, for the rain rarely gets to their roots, in consequence of their close foliage throwing it off. Cleanliness must be attended to in all things, and if anything directed to be done previously be still omitted, do it at once, upon the principle of "better late than never." Things may not be so well for delay, but they may be better than none.

FOURTH WEEK IN JULY.

Auriculas.—Clear the pots of weeds, and the plants of decayed and decaying leaves; move the surface of the soils in the pots, and keep them moderately moist. The compost intended for potting these plants should not be suffered to get dry, if it be already prepared; occasional waterings with saltpetre water, about one ounce of saltpetre to one gallon of water, will be of great service to it. August is not the best season for repotting these plants, but if not performed in May last, something should be done to refresh and invigorate them for the next spring bloom.

Pinks.—Planting out the rooted pipings of pinks, &c., should be attended to; they get weak if left in the piping bed, so closely huddled together, and, even if the weather be anything but favourable for this sort of work, it must be attended to, or weak and lank plants will be the consequence. If the beds intended for the temporary reception of these plants be thoroughly watered, making certain that the soil is wet to the depth of four inches, you need not fear but they will do well, particularly if planted out in the evening; for at this stage of their growth, they draw root in a few hours, and no shading will be necessary. Gather your seed when the weather is favourable; if you neglect it till rain comes, you may lose the greater portion.

Carnations and Picotees.—The laying of carnations and picotees should now be attended to. The operation is performed in the following manner:—First select the joint you intend cutting at; it should be two or three from the top of the layer (but, so long as the stem be young, it is of little consequence which joint be taken); this done, remove as many leaves from about the joint as are in your way, and with a keen-edged knife commence, between the joint below and the one selected for rooting, cutting half way through the stem of the layer, and passing your knife upwards till half an inch beyond the knob of the selected joint. Then cut off the extra piece close to the knob that is intended for rooting. Your compost being at hand, fill up sufficiently for the layer to reach it, and press it a little firm; carefully placing the layer into the new soil, peg it down firm, with the head of the layer a little elevated, in order to keep the joint open. It is customary with many growers to trim the foliage of the layers, both at the sides and also the top, cutting them nearly down to the heart of the plants. This system is injurious; not one leaf should be cut, or removed, more than is necessary for the operation of laying. Before commencing the operation of laying, it is necessary that the surface of the soil in the pots should be stirred, cleared of dead leaves, &c., and in readiness to receive the new soil prepared for the layers.

Dahlias.—The winged black fly seems to have become general through the country; letters from all parts with complaints are coming in daily, noticing its sudden appearance, and rapid increase. Various remedies (such as, lime-water, soap-suds, and tobacco-water,) have been applied, without success. It seems the mere knocking them off the plants by the force of liquids will not destroy them, and that some more effectual remedy is required. Among our numerous and intelligent readers, we may hope to find one who has discovered a remedy for the destruction of these pests, and if so, a communication on the subject will be thankfully received. The following suggestion is worthy of notice:—If some vegetable gluten be added to either of the above-named solutions (such as gum-arabic), in quanity sufficient to render the liquid slightly glutinous, so that on its drying, the wings and limbs of these insects would become attached, their bodies would become fixed to each other, or to any object they may happen to fall on. A weak solution of gum-water alone would, in all probability, be best; it would not injure nor disfigure the plant.

Annuals. — Annuals in pots require watering and shading, trimming off their dead leaves, tying some up to sticks to support them, and giving them air. Clintonia pulchella, and many other very beautiful subjects in pots, may be kept a long time in flower, by shading and watering well. In the open ground, annuals require watering, tying up, cutting down decaying flower tems, clearing from weeds, and occasionally learing the earth round about them.

Balsams are now, with many persons, approaching perfection. Particular attention should be paid to the shading of them, in order to prevent their flowering being damaged by the sun. The same attention should be paid to the coxscombs, egg plants, and globe amaranthus.

Perennials.—Perennials in pots, such as the Chimney Campanula, or Campanula pyramidalis, some of the delphiniums, petunias, verbenas, in short, all kinds—hardy, half-hardy, and tender, require considerable care and vigilance during the heat of the summer months. A few hours neglect destroys the bloom, and this neglect much increased would destroy the plants altogether. Those in the open ground must undergo the same routine, except that watering need not be so frequent. They must, if slender, be tied up to stakes; decayed stems, leaves and branches must be cut off. Those which are out of bloom may be propagated by parting the roots, and this may be done two ways. If the borders in which they are growing are to remain in the same style, the best mode of doing this is to cut off with the spade portions of the patch which the plants form all round it, or on one side more than another, or at the back or front, as the case may be, so as to leave the plant in the ground perfectly undisturbed, and no larger than it is wanted; digging out these pieces leaves holes, which must be filled up with fresh soil. The portions so cut away may be divided into moderately small pieces, and be planted in nursery beds, to grow into good-sized plants. Among the subjects to be so propagated may be mentioned the scarlet lychnis, gentianella, the several campanulas, daises, polyanthuses, primroses, almost all herbaceous plants, the Michaelmas daises, or asters of all kinds, peonies, &c. Where it is desirable to make the largest quantity of stock, it is better to dig up the whole plant, and divide it into as many pieces as can be made, with a portion of root to them, and planted in a shady border, six inches apart, there to grow and establish themselves.

Polyanthus.—This is a good time to sow polyanthus seed. These seeds may be sown in light earth, in boxes, large wide pots, or flat wide garden pans. The boxes or pots must then be set where only the morning sun comes; they must stand there till the end of September, and then be removed where they can have the full sun. The seeds will come up the same season, stand the winter well, and be fit to plant out early next summer.

Bulbous Roots.—This is still a proper time to transplant several sorts of late flowering bulbous roots, now out of bloom, such as martagons, and red and white lilies. When the roots are taken up, the offsets must be separated from them; when this is done, the principal roots may be planted again in the proper places, or may be dried and cleaned, put up till October, and then planted. May also still remove bulbs of the Persian and English bulbous irises, the bulbs of narcissuses, spring crocuses, and jonquils, frittillaries, and most other bulbs whose leaves are decayed. Bulbous rooted plants yield seed plentifully in a general way, and it may be sown as soon as it is ripe. The seed of all kinds of lilies, tulips, hyacinths, irises, crown imperials, narcissuses, crocuses, and the like, may now, for instance, be sown. Sow in large pots, cover a quarter of an inch thick, place them in a cool frame until they germinate, which will be in spring. They will do equally well in the open ground if undisturbed, where they may be raked in well, and a little light earth be sifted over the whole. There they may remain all the winter, but if it be very severe, put a little peas haulm over the beds, which is the greatest protection there can be against frost and its bad effects.

Anemones.—Anemones may be taken up, if they have decayed down, and they should be well dried in the shade before they are stored away. Sow seeds of anemones in rich, light ground; cover them well over, but not too deeply, and in dry weather let the ground have a good soaking before they are sown, as well as occasionally till they are up, for the earth must never be thoroughly dry afterwards.

Ranunculuses should be taken up, as soon as their foliage turns yellow, and be carefully dried in the shade before they are put away in boxes. The seeds also may be sown, and, if choice, they should be sown in pots, or boxes, so that they might be removed to a pit or under glass, to keep off excess of moisture in the autumn, and frost in the winter.

Seedling Wallflowers, Sweet-Williams, Canterbury Bells, Antirrhinums, Rockets, Columbines, and all other hardy biennials and perennials in the seed bed, should be planted out to grow into strength, where they are to bloom the following year; some in the borders, if necessary, but seedlings are better all in a bed—they are the easier to be selected.

Roses.—Examine the budded stocks and continue to remove all the growth of the stocks, which will for a considerable time push at all the joints, and greatly exhaust the strength that should go to the buds. As the buds push, let them be secured to a stick, or to the stock itself, so that the wind may not break out the bud, which is a very easy thing if the wind has any power, the shoots, when long, being easily blown clean out of their budding place. Roses of all kinds worked on stocks are liable to injury by the growth of the stock distressing them, so that they cannot be too often looked over and deprived of their shoots and suckers. The stakes also to which the trees are tied should be examined, and all seen to be fast, or made so, as the wind will blow about those with a large head enough to damage them materially.

Rhododendrons and Kalmias.—These flowers should be deprived of their seed-pods as soon as the bloom begins to decay, and be copiously watered. This, if well attended to, will secure a good bloom for the next season, whereas if the seed-pods be allowed to swell, and there be a scarcity of moisture, a stunted late growth and no bloom for next year are inevitable. American plants which have been bloomed in pots, set the better if denuded of their seed-pods, and planted out in the ground without disturbing the balls of earth, and they require more watering than even the established plants; they should be planted in the shade. They may be carefully re-potted when their growth is made complete and the wood ripened. They will require pots one size larger, to make room for their new roots, and the plants will have grown in proportion to the roots, so that they will be just as well proportioned to their new pots as to their old ones. Whilst the plants are making their growth in the open ground, see that there are no more branches than are wanted for the beauty of the plant, and if there be, take them off, to throw strength into the stems; and if any branch or branches appear to be taking the lead too much, cut them back, or the growth would check the rest of the shrub altogether, and the whole organs of the plant run into the one branch or branches only.

Seeds of Flowers.—All kinds of flower seeds should be gathered in dry weather, and the stems of those that are not intended to seed should be cut down. The dead stalks and leaves of all plants should be cleared away, and the borders kept neat and clean. The seeds should be spread on mats to dry in an airy place where the sun can come; when they are well hardened, beat or rub them out, and put them in paper or canvas bags, or into boxes, till the season for sowing them.

Box and Thrift Edgings.—Clip box edgings pretty low and not too broad. Edgings of thrift should also be trimmed a little; cut off all the decayed flower stalks, and where the sides have grown uneven, let them be cut to regular order, either with a pair of garden shears, or, if much overgrown, may be cut with a sharp edging iron.

FRUIT GARDEN.

FIRST WEEK IN JULY.

Examination of the Trees which were Budded last Summer.—Look over the trees which were budded last summer, and let all the shoots that rise from the stock, besides the bud-shoots, be displaced, for those would rob the proper shoot of some nourishment. The buds will now have made vigorous shoots. If any seem to require support, let them now be properly secured, either with stakes, or tied to that part of the shoot left above the bud when headed down. Over-luxuriant and, consequently, unfruitful trees, whether in houses, or on the open walls, may be readily brought into a more moderate growth, and more fruitful habit, by rebudding all the strongest branches. Double or twice worked fruit-trees are always found most suitable for placing in pots to be forced.

Grafted Trees.—Grafted trees should be at times looked over, in order to displace such shoots as are produced from the stocks, &c. Examine also if any of the grafts have made such vigorous shoots as to require support, and let them be secured.

Fig-trees.—Fig-trees will now require great care. All strong shoots should now be laid close to the wall, but use the knife as little as possible. Let no shoots be cut off except those which grow foreright; such as grow in a proper position should be carefully trained, for those which are now laid in are the shoots from which the fruit is to be expected next year. As these trees bear no fruit except from the one year old shoots, it is best to leave a sufficiency at this time, since it will be easy to prune away, at the general season for pruning, such as are not wanted. Let the shoots be laid in regularly, not one across another, and secured properly, for, on account of the wideness of the leaves, the wind has great power over them.

Apples and Pears should now be moderately thinned, and good account will be found in the practice. This should be done when the fruit is about half-grown, or when all apprehension of its dropping is over. Nothing tends more to keep fruit-trees in good health than regularly to thin their over-abundant crops, and that always before they begin to swell off for ripening, for if this be delayed till they are nearly full grown, the mischief is in a great measure already done, both to the tree and to the fruit left.

TRAINING SUMMER SHOOTS.—Continue to train the advancing shoots of all kinds of wall and espalier trees. Do not shorten them on any account until they have arrived at their growth, as that would make them push a parcel of weak spray, which would not ripen, and so would require to be pruned away in the winter or next spring. Many kinds push lateral twigs on their summer shoots, and generally begin to do so after midsummer. These should always be pinched off as they appear, and likewise any water shoots that rise from the old wood or spurs about this time, which would save a deal of trouble in the winter prunings.

VINES.—Vines may be improved in flavour, as well as to ripen earlier, by taking away circles of bark. The time for doing this is when the fruit is set, and the berries are about the size of a small shot. The operation, however, must not be performed at all on weak trees, nor is such an operation to be considered a necessary part of the management of vines; it may only be occasionally performed in order to correct over-luxuriant growth, or to heighten the flavour of inferior fruit.

WASPS AND SNAILS ON WALL TREES.—On early wall trees, having fruit beginning to ripen towards the middle or latter end of this month, they will be greatly subject to the visitation of the wasp. Abercrombie recommends bottles filled with sugared water to be hung upon the trees, so that the wasps may drown themselves; we consider them, however, to be so many cards of invitation, hung out to the wasps to come and regale themselves. There is no other remedy for the wasp than the destruction of his nest; but in regard to another enemy of wall fruit, viz., the snail, they may be searched for early in the morning, and in an evening after rain. Their removal is but the work of a moment. The damage they commit to choice wall fruit, and particularly to apricots, peaches, and nectarines, is incalculable, and as the depredation, as far as the snails are concerned, is carried on during the night, the most choice portion of the fruit is often destroyed before the proprietor is aware of it. It is a good preventive to sprinkle the border with lime water or barilla, but if the walls be old, and the defalcations in them be large, the snails will choose the ruined holes as their retreat, and nothing then but the most vigilant picking will remove the enemy.

MELONS FOR LATE CROPS.—Melons, for crops to ripen in October and the beginning of November, may be obtained by growing them in flued pits, such as are used for nursing young plants, or in pits of any ordinary construction, having pipes laid in them for the circulation of hot water, which pipes will take but little space, the diameter of five or six inches being sufficient, and as the first course of pipes will be placed perpendicularly to the lower or returning pipe, less room will be occupied than by using flues of the smallest dimensions. About the middle of the month, those plants which are intended for such late crops may be planted out. It is not, however, to be expected that fruits, especially melons, which require all the sunshine we have in the hottest months to bring them to perfection, will either be fine or high coloured, ripening so late in the season. Plants for this purpose should be raised from seed sown the latter end of last month, or even in the beginning of the present, in any other melon pits or frames in use, the same process of sowing, raising, and finally planting out, being the same as has been directed for melons, for more early crops, with the difference that they can be more depended upon, and fewer accidents are likely to befall them. The pit is to be filled with well-fermented dung; if considerably exhausted the better, as a mild heat only is required; or if composed of dung and half decayed leaves or tanner's bark, it will give a more lasting and mild heat. This being prepared, and the plants planted out about the third week in the month, the bed may be earthed all over at once, or an addition made to it as occasion may require. For this crop it will be necessary to select sorts of the earliest description, the rule holding always good, that those which are the best suited for early crops are always the fittest for late ones.

SECOND WEEK IN JULY.

CHERRY TREES, trained as espaliers and on walls, will now require to be minutely examined, with the view of removing all superfluous and ill-placed shoots close to the old wood, and shortening such as are intended for artificial spurs, into one or two eyes. Morella cherries differ in their habits and mode of growth from all others; and as they produce a greater number of young shoots, cultivators too often widely err in being afraid of reducing the redundancy. In order, in some measure, to correct this common error, no such shoots should be laid in nearer to each other than from three to four inches. These shoots should at this time be laid in at full length, leaving the shortening of them till the winter pruning. Protect and gather the fruit now ripe carefully. Prepare netting for the later sorts which are to be preserved.

CURRANTS.—Syringe the bushes well where the aphides have congregated, but it is advisable to destroy the currant pest by cutting back the shoots near an eye, below the leaves that are puckered and covered underneath with insects, and to cast each cutting forthwith into some fire or burning heap close at hand; the shrubs can then be more easily washed by those who do not posses an engine.

APRICOTS.—Apricots, peaches, and nectarines, and indeed all other trained fruit-trees, require a correct and judicious regulation and laying in of the yearling or spring wood selected by a knowledge of future results. Slight thinnings may also be effected, but the whole of the fruit should be exposed as much as possible to the sun. In favourable seasons, some of the early sorts may be gathered at the end of the month, and if laid on a cool place, can be preserved for a short time.

GOOSEBERRIES. — Those which are intended for dessert should now be thinned out —cut out also the young wood where it is necessary. Cuttings of the young shoots planted at this time will be rooted by autumn. and where the object is to increase any particular variety, this plan will be found most beneficial.

STRAWBERRIES.—The strawberry runners are now coming on, and will soon be fit for pegging down, either in the soil or small pots; the first young plantlet on the string, emerging from a fruitful origin, is ever to be preferred. The runners of all sorts, intended to be propagated, should be taken off and bedded in nursery beds, in order to acquire strength to be planted out afterwards, or rather later in the season or early in spring. Although this is a very good season for making plantations of these fruits, still circumstances may occur to prevent such being done, such as want of space until other crops be removed; the dry state of the weather, &c., for it will be easier to water the plants in the nursery beds than in the finished plantation. Besides, all plants of this description are improved by frequent transplantation, which would of itself be a sufficient reason for rearing them previously to their final planting out in a nursery bed.

VINES.—Go over these in order to remove all shoots that are not required, and strengthen the remainder. If not done before, stop all the shoots on which there is fruit, one joint beyond the grapes, and tack all the growing and fruiting shoots to the wall. Leave no shoots growing but those which are intended to bear the next season, and these should be the strongest only.

FIGS.—Give all possible light and air to the fruit, yet do not take off a leaf, if it can be avoided; remove any that are of a crude and late growth.

RASPBERRIES, if not ripe, will be much benefited by a good watering of clear liquid manure. Do not damage the suckers which are to form next year's bearing shoots.

BUDDING.—This indispensable operation in a fruit garden should be done this month. Peaches, nectarines, and apricots may be budded on almond stocks, but plum stocks raised from the kernels of the fruit, or from suckers, are the best and most lasting. Cherries should be budded on cherry stocks; and pears, either on pear stocks or quince stocks. Those on quince stocks do not grow so tall, and they bear sooner. Plums should be budded on plum stocks. Budding should be performed within six inches of the ground. The budding is accomplished by removing with a short knife a portion of the bark with a leaf from the tree you wish to propagate, and by making a cross incision, and raising the bark on each side, tucking in the bark with the leaf on it, which, in fact, contains the bud beneath the bark of the stock, and then fastening it so closely that the new bark unites with the old stock, and the bud becomes a part and parcel of the tree, the rest of the stock being cut away, and the portion that is left being prevented from growing. Standards are sometimes budded, four, five, and six feet from the ground, but many prefer even the trunk, growing from the eye, instead of being formed of the stock.

MELONS.—The weather sometimes happens at this season to be very wet, and when that is the case, the melon plants which were planted out under hand or bell-glasses are more exposed, and cannot be so readily sheltered; but as these plants are now full of fruit, all possible means should be used to protect them when the weather happens at this time to be uncommonly wet. But those kinds of coverings of mats or canvas are only to be used occasionally, and not to remain on longer than just to defend the plants from heavy rains, and when there happens to be a cold night. Melons, in dry weather, and with a dry heat, are very apt to be infested with the red spider or acarus, and the symptoms may be observed always for some time before the insect is seen with the naked eye, by the leaves curling and cracking in the middle; whenever they are observed in that state, water them all over the leaves from a watering pot with a rose, or an engine, about six in the morning, and about eight o'clock shade them with mats if the sun shines, and shut the frames close down till about eleven: then admit a small quantity of air, letting the mats remain till about three in the afternoon, when they should be taken off; shading with mats will prevent the leaves from being scorched by the sun whilst they are wet. If the wind be south or south-west, water them again about four in the afternoon, shutting them up close to keep the heat in, which will cause a strong exhalation, and destroy the acari, as they are by no means partial to moisture. In watering, throw as much as possible on the under side of the leaves, where the insect generally lodges. The vines may be gently turned, taking great care not to hurt them, by which means the water can easily be thrown all over the under-side of the leaf, which must be done in a gentle shower from the engine, or from a watering pot with a rose, so as not to wash up the mould from the plants; at the same time throw a great plenty of water on the lights and sides of the boxes. After you have done watering, lay the vines gently down in their former position. If a sunny day, let the mats remain as before directed, until the leaves of the plants be perfectly dry, admitting air according to the heat of the day. The acari may be killed by subjecting them to the heated fumes of sulphur, urine, &c., raised from a warm place, or boiling hot water in a vessel, and that without hurting the plants. Before the frames and lights are used, wash them well inside and out, first with clean soft water, and then with soap-suds and urine mixed, using a brush or woollen rag in the washing. This will kill the eggs of the insects that may have been deposited the preceding season.

THIRD WEEK IN JULY.

THINNING APPLES AND PEARS.—Apples and pears, particularly the finer sorts, should be thinned, and the result will soon show the good policy of the system. They should be thinned when about half grown, at a time when all chance of their dropping off is over. It is not going too far to say that all small fruits, gooseberries, currants, raspberries, and even strawberries, should be thinned. This should be done with sharp-pointed scissors, such as are used for thinning grapes. The best cultivators of these fruits thin them very much. Nothing tends more to keep fruit-trees in good health than a regularity in their crops, and this should always be done some time before they swell off for ripening, for if delayed till nearly full grown, the mischief is in a great measure done, both to the tree and the fruit that is left.

GATHERING FRUIT.—The great art of producing good fruit on well-established trees consists in regulating the quantity to be retained and carefully gathering them. A cherry-tree will bear five or six gatherings, for the best alone ought to be taken each time. Wall fruit in general is so easily managed that the fruit is mostly had in perfection, but standards are too often cleared at a single gathering, ripe, half-ripe, and not ripened at all; and this rough lot goes to market to be sold for less than the good amongst it would bring alone, or it is half wasted in the house. Great care should be taken in gathering almost every fruit that ripens irregularly. Plums, like cherries, might be gone over many times, and only the best taken. It is impossible to calculate the advantages of gathering the forward first, and leaving the others to ripen by degrees.

APRICOTS.—All watering must now be withheld until the fruit be gathered. Make provision for those which are ripe to fall into mats, nets, or upon moss; look over the trees every morning, and pick the ripe ones, and lay them in a cool place.

BUDDING.—Loosen all the bandages of those put in last month. Now is the preferable season, and some recommend beginning with cherries, apricots, &c., leaving pears and apples to the last; but this has to be determined by the state of the buds and shoots, so that no positive rule can be laid down.

CHERRIES.—Give the early trees a good syringing, and see that the Morellas are netted in time. Remove the nets from the trees as soon as the fruit is gathered. Lay in all the young wood of old trees, as the fruit comes better than on old spurs.

STRAWBERRIES.—Take off the strongest runners, and plant them six inches apart in the row, and the rows a foot apart, on a good rich border. There they will bear the first year, and the crops improve the next. If there be no edging to the beds and borders in the fruit garden, or even in the kitchen garden, the warm side is often edged with strawberries. The best place, however, for strawberries, is a border under a south wall, where they always ripen much earlier. Special attention is now requisite to get a stock for forcing; indeed, upon attending to them early, much of the success depends. Lay the runners into three-inch pots, and on the runner place a stone to keep it steady. Use a soil of rich loam, with a little leaf mould, or very rotten manure; or they may be laid into large pots at once. Cover up the ripening fruit from birds, and those to be used for preserving must be gathered perfectly dry.

NECTARINES may now be budded upon the inferior peach and nectarine trees, the branches of which may be afterwards lopped off as the buds succeed. The best stock, however, is the muscle plum. Hasten on the ripening of the wood and fruit, which thinning and nailing assist materially.

PEARS.—The breast-wood must now be broken down, and the leaders tied and nailed in, whether on walls or espaliers. Look over standards also, and thin where necessary; regulate the growth of grafts and young trees. Make provision for young bearing wood on the old wall trees, by laying in plenty of young shoots. Bud on pear or quince stocks: those budded on standards, say from four to six feet high, bear the soonest; but low budding, about six inches from the ground, is most commendable.

PLUMS.—Many kinds bear best on the young wood; due provision must be made accordingly. Give a final thinning to the fruit.

RASPBERRIES.—Cut down the last year's canes of such raspberries as have ripened their fruit; this will cause the young wood, from which the future crop is to be expected, to grow much stronger and ripen better; the fruit will also be very much improved by this practice. The reason is, that the old canes having performed their office, as soon as the fruit becomes ripe and is gathered, are afterwards of no use to the plant, but the direct reverse; for whilst they remain attached to it, they deprive it of a considerable portion of nourishment, which their removal will throw into the young wood. The canes may be thinned out to four or five. It would accelerate their growth to water them with liquid manure; stop the strong shoots, and secure the whole with stakes.

VINES.—Thin out the berries as soon as they are set, and return to thin them a second time. Take off all laterals, and stop the shoot two eyes above the bunch. Keep the wood very thin, so as to allow free scope for the sun and air.

MELONS.—As the different crops approach maturity, withhold water from the plants, in order to improve the flavour of the fruit; let them get as much light as possible, and at the same time tolerably free ventilation.

CLEANING THE BORDERS ABOUT FRUIT-TREES.—Let all the fruit-tree borders be now kept remarkably clean. By keeping the borders neat, it is not only agreeable in the greatest degree to the eye, but a clear smooth surface throws up a reflection of the sun's heat on the trees, which greatly promotes the ripening, and improves the flavour of the fruit.

FOURTH WEEK IN JULY.

VINES.—Look over the vines again, both those against walls and in vineyards, and let them be once more cleared from useless productions. All shoots whatever that have been lately produced, either from the old or young wood, must now be displaced, for if left, they would darken the fruit very much, and greatly retard its growth and ripening.

FIG-TREES.—Take care of fig-trees. The figs will now be nearly full-grown, and beginning to ripen; they, therefore, require a due share of sun to promote their ripening, and to give them true flavour. The Italians, when they wish to forward the ripening of figs, drop a little sweet oil from a quill into the eye of the fruit; but care must be taken not to hurt the skin, which would make the fig burst. This will make a difference of at least a fortnight in the ripening.

NEW-BUDDED TREES AND BUDDING.—Go over the stocks of trees which were budded in June, and let all the bandages be loosened. This should generally be done in about three weeks, but never exceed a month, after the budding is performed; otherwise, as the inoculation bud will swell, the sap will be stopped in its regular course, and the parts about the bud will be pinched, and swell irregularly.

GATHERING WALL-FRUITS.—Much fruit is spoiled by careless or unskilful gathering. Fruit intended for the table should be gathered early in the morning, whilst it is cool; perfectly clean and soft doeskin gloves should be used, and flat open baskets, in which each fruit should be laid singly. No force should be used in separating peaches, nectarines, figs, or summer pears or apples from the tree; raising them up gently with the hand beneath will cause them to quit hold readily, if properly ripe. A suitable fruit-room should be appointed to every garden, as gathered fruit requires a good deal of attention to keep it in a proper temperature. That which is fully ripe can scarce be kept too cool, and that which is not quite ripe should be kept rather warm.

Cleaning the Borders about Fruit-trees.—Let all the fruit-tree borders be now kept remarkably clean. By keeping borders neat, it is not only agreeable to the eye, but a clean smooth surface throws up a reflection of the sun's heat on the trees, which greatly increases the ripening, and improves the flavour of the fruit.

Strawberries.—Strawberries should now be planted, this season and the spring being the best, although under favourable circumstances they may be planted at almost any other. They should be copiously supplied with water when planted, and the ground trenched at least two feet deep, as their roots penetrate to a great depth; the ground can scarcely be made too rich for them. Such strawberries as are planted in lines in the fruit garden should have their runners cut off, and a large quantity of rich manure dug in between the rows. Do not cut off their leaves, as has long been the practice, as it injures the plants, and leaves the buds without any protection during the winter. It will be proper also at this time to prick out a supply of young strawberry plants into nursery beds, both for spring planting, and for potting and late forcing. For this purpose the strongest and best runners should be selected and planted in beds, each sort separate, and six inches apart, by which means they will be in excellent order in spring for either purpose.

Defending Wall-fruit from Insects.—Continue to defend the choice wall-fruit from insects and birds. The latter are to be kept off by fixing up nets before the trees, and wasps and slugs are to be guarded against, for these insects will devour or spoil the most delicate fruit at a surprising rate, and if not prevented make much havoc.

Walnuts.—About this time, green walnuts are fit to pickle. When nearly full grown, and whilst the shell is yet soft enough to be pierced with a pin, they are suitable for the jar, and not afterwards.

General Directions.—The late crops will be at their utmost luxuriance, and a gradual, not sudden, pruning must be attended to. Those houses and places where the crops are being cleared must have continued drought until all the fruit is gone; when, in some cases, a thorough syringing, and a throwing open must take place; in others, a cutting back to force for another crop. In all cases, take the ou line of treatment from what nature gives, and, if possible, assist and improve upon it; and although in a certain sense we cannot surpass nature, yet from certain artificial adaptations, we can aid her, and we may be sure she will amply repay us for our toils.

KITCHEN GARDEN.

FIRST WEEK IN JULY.

General Directions.—Watering must be particularly attended to—the ground kept clear of all weeds, and all crops, as they advance, hoed and earthed up. Attend to neatness and regularity in every part. Let all useless and decaying leaves and stems of vegetables be removed from amongst the crops, and carry them to any piece of ground that is to be immediately dug; this will not only give the garden a neat appearance, but will manure the ground on which they are put. The leaves and stems of all crops of cabbages, potatoes, carrots, turnips, &c., as they are daily gathered for use, are to be carried away to an unoccupied place and cut off, and as soon as convenient be dug into the ground, or carried at once to the compost yard for making vegetable mould. They should not be left carelessly on the ground on which they grew, unless they be such roots of cabbages or borecoles as may be wanted to produce sprouts for a future crop.

Artichokes.—At this season, artichokes will be coming into use; particular care should be taken to break down the stalks close to the ground as soon as the heads are cut off. This practice, though disregarded by many, is nevertheless of great importance, for if the stalks be suffered to remain, they impoverish the roots, and exhaust them to such a degree as to injure their future bearing.

Brocoli, for a late spring crop, may be planted the beginning of this month. Hoe and earth up the advancing crops planted in May and June, according as they may need.

Brocoli and Brussels Sprouts.—The different sorts of greens, under the former denomination, should be planted, as should also Brussels sprouts and savoys, preferring showery weather for the operation. The directions given in the former month are to be attended to.

Cardoons.—Those which were sown in May should now be finally thinned out to eight or nine inches apart in the row, then hoe the ground amongst them, whether clear or foul of weeds, in order to stir the surface, and put a little earth to their stems from that thrown out in forming the trenches. Never put too much at a time, and be sure not to bury their heart-leaves, observing always to earth up when the earth is in a dry state. Repeat this earthing every two or three weeks throughout the summer, for if the plants be allowed to grow long between the earthing, it is then somewhat difficult to do it well on account of their rapid growth. Those sown in June for a full crop, may be finally thinned out about the latter end of the month, observing to earth them up, as above directed, as they advance. Cardoons for a late crop may still be sown. Choose as dry a spot as possible.

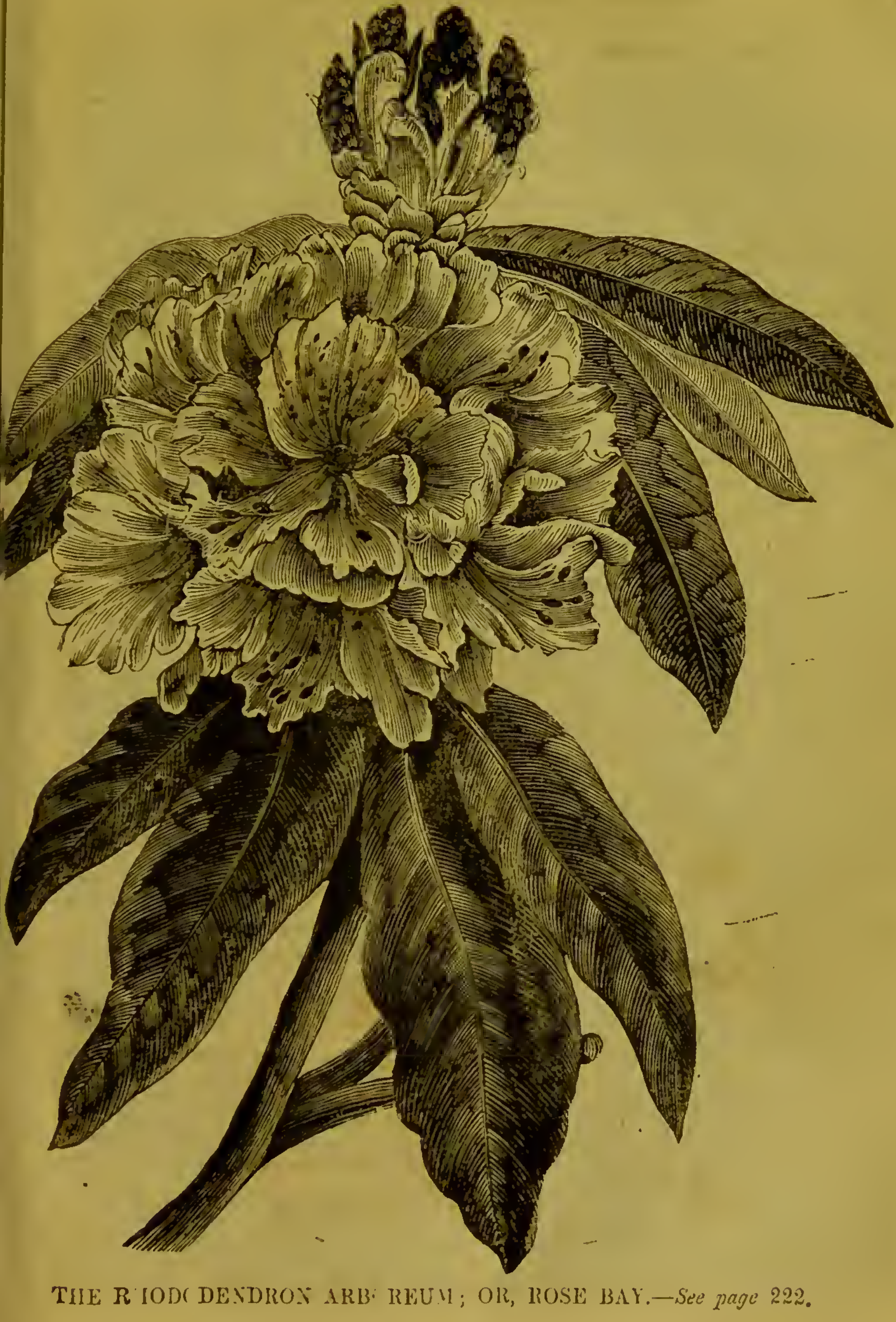
CAULIFLOWERS.—About the middle of the month, the cauliflowers which were sown in May and intended for a late crop, and which were pricked out the latter end of June, will now be of a proper age to plant out permanently; they may be planted in an exposed situation at not more than eighteen or twenty inches square, as the flower of this crop will attain to as large a size as those of the former crops of the season; they must, however, be planted in a rich soil in order that they may be obtained in the greatest possible perfection, and in the greatest abundance. If they be properly stored, some excellent cauliflowers may be had at Christmas, and even at a later period. They must be regularly watered if the weather be dry, and in all other respects attend to them according to the directions given for the other crops of cauliflowers.

CELERY (EARTHING UP).—Various plans have been recommended for the general culture of celery; but we consider the following, as adopted by Mr. Judd, to be the most advisable to be presented to our readers. The ground intended for celery is prepared during winter by being trenched two spades deep, mixing a good quantity of rotten dung during the operation. A second trenching is then given, in order that the dung may be better incorporated with the mould, and then it is left in as rough a state as possible till the plants are ready to put out. In the ground thus prepared, trenches are formed twenty-six inches wide, and six inches deep, at six feet distant from each other, measuring from the centre of each trench. Before planting, the depth of the trenches is reduced to three inches, by digging in sufficient dung to fill them up to that extent. At the time of planting, if the weather be dry, the trenches are well watered in the morning, and the plants are put in six inches apart in the row in the evening, care being taken to keep the fibres quite wet whilst out of ground. As they are drawn from the nursery beds, the plants are dressed for planting, and then laid regularly in the garden pan, which is kept filled with water for the purpose. The trenches in which the rows of celery are planted being so very shallow, the roots of the plants grow nearly on a level with the surface of the ground. This is, however, considered to be particularly advantageous, for as considerable cavities are necessarily formed on each side where the moulding takes place, all injury from stagnant water or excess of moisture is prevented. In the operation of moulding or earthing up, it is necessary in order to prevent the mould from falling into the heart of the plant, to keep the outer leaves as close together as possible; for this purpose, before the moulding is begun, long strings of bass matting are taken and tied together till of sufficient length to answer for an entire row; the string is fastened to the first plant in the row; then pass it to the next plant, giving it one twist round the leaves, and so on till the other end is reached, where it is again fastened. When the moulding is finished, the string is easily unravelled, by beginning to untwist it at the end where it was last fastened.

COLEWORTS.—This is now the time to sow a full crop of coleworts to serve the family in autumn and winter, and some to stand till the spring, when the savoys and such like greens are all consumed. What is to be understood by coleworts is any sort of cabbage plants, which when their leaves are from about as broad as a man's hand till they begin to cabbage, are most desirable open greens to use under the name of coleworts. To have good colewort plants, sow some seed of the best sorts of Yorkshire, Battersea, or sugar-loaf cabbage, and Antwerp kind; for these sorts being of a quick, close, hearting nature, even in their young growth, and boiling most tender and sweet, are superior for coleworts; the large kinds of slow hearting cabbage are improper, and the common, open, or field coleworts are now banished from almost every garden. The advantage of sowing for this purpose the above sorts of cabbage seed is, that such plants as are not used by way of coleworts may be permitted to stand to cabbage, and such of those from the sowing as do not run up to seed in the spring will cabbage at a very early time. In order to have coleworts in plentiful succession for autumn and winter use, some sow seed the first fortnight and towards the latter end of the month, and from these sowings they will be fit to plant out next month for use in September, October, November, and December.

(Continued on page 210.)

THE RASPBERRY.—*See page* 210.



THE RHODODENDRON ARBOREUM; OR, ROSE BAY.—*See page* 222.

KITCHEN GARDEN.

CONTINUED.

Endive.—About the middle of this month, the endive which was sown according to the directions given in June will be fit to plant out. An open spot of rich, light earth must be chosen, which must be dug a full spit deep. Then some shallow trenches must be formed with the spade, or large drills made with the hoe, about twelve or fifteen inches asunder. The plants are to be set in these trenches or drills, about nine or ten inches apart, and a moderate watering immediately given to them, which must be occasionally repeated, until the plants have taken fresh roots.

Garlic and Eschalots.—The eschalots and garlic which are full grown should now be taken up; the proper season for which is known by the leaves, which always begin to wither when the bulbs or cloves have attained their full size.

Herbs for Drying and Distilling.—Gather mint and balm, pennyroyal, sweet marjoram, as also carduus, hyssop, sage-tops, lavender-spikes, marigold, camomile flowers, and other aromatics, which are now advancing towards flowering, in order to dry, to serve the family in winter. These kinds of herbs should always be cut for the purpose of drying when they are in the highest perfection, nearly of full growth, and coming into flower, and some when in full flower, as lavender, marigold, and camomile, for their flowers only. Let them be cut in dry weather, and spread or hung up in a dry airy place, out of the reach of the sun, that they may dry gently. Gather likewise, spearmint, peppermint, pennyroyal, lavender flowers, and other herbs to distil.

Lettuce.—Dig a spot of the best mellow ground, and so sow some lettuce seed; the cos, Silesia, imperial, large white, and the brown Dutch cabbage lettuces, or some of each, are still the most proper kinds. These two sowings will raise a proper supply of good plants, to furnish the table regularly the latter part of August and all September to October.

Onions.—Examine every week this month the forwardest crops of bulbing onions; if any be at full growth, and their leaves begin to wither, take the roots out of the ground. It is, however, rare that they are properly bulbed enough this month, in which case defer pulling till August, and till the leaves begin to decay considerably. As soon as taken up, they should be spread to harden, upon a clean and dry spot of ground, open to the sun, and there let them lie a week or a fortnight, remembering to turn them once every two or three days, that they may dry and harden regularly. When they have lain the proper time, they must be gathered upon a dry day, and carried into the house. Let the windows of the room be kept constantly open in dry weather, for a week or two after the onions are housed, and after that admit no more air, but keep the windows constantly shut, only observe to turn the onions over now and then, and pick out any that are decayed.

Turnips.—This month may be considered as the most favourable season for the sowing of turnips for autumn and winter use. The plants raised from this sowing will be fit to draw in September, and will improve in growth from Michaelmas to Christmas, and should a moderate winter ensue, they will continue in perfection until the following spring. The turnips which were sown in May or June should not be hoed, and the operation should be performed when the weather is dry. All weeds should be cut down, and the turnips thinned out to about seven or eight inches distant.

SECOND WEEK IN JULY.

General Directions.—Remove all the remains of crops which are done with, and dig and dress the ground, where it is required. Continue to sow and plant occasional autumn and winter crops. Prick out and thin out seedlings. Stick peas and scarlet runners where it is required. Gather ripening seeds and herbs. Earth up the crops which want it, such as peas, beans, cauliflowers, cabbages, &c. Water where required, especially crops which are now planting. Clean the paths, and keep them clear of weeds everywhere.

Asparagus.—If the weather be dry, continue the operation of watering. The cutting of the established beds should now be wholly discontinued, and clear them well from all weeds.

Beans.—The broad beans will now be greatly infested with the black fly or collier. Cut off all the tops where the vermin appear, and burn them instantly. Top those which are coming into flower, and draw the earth up the stems of the rows which are up and advancing.

Brocoli, Brussels Sprouts, &c., may be pricked out from the seed-bed into nursery-beds, six inches apart, to grow into strength. Seed may also be sown for late crops. Those large enough to be planted out may be set out for a principal crop, choosing, if possible, the period after rains for the operation.

CABBAGE.—Sow cabbage seed, to use as coleworts. Plant out cabbages where the crops have been taken off the ground, and the room is not particularly wanted. They are a useful crop, and a succession should always be kept up. Plant out cabbages also for pickling.

CARROTS may also be sown; they will come in for autumn and winter use. The ground should be dressed, trenched, and laid even before the seed is sown, and as soon as the plants are fairly up, they should be weeded and thinned.

CAULIFLOWERS.—Plant out some of the spring sown to flower in the autumn; hoe between and earth up any that have been planted out in the spring months. In planting out, wait for showery weather; give the ground a good soaking all over, before the plants are put in, and water them well after they are planted.

CELERY.—Earth up what is growing in the trenches, and plant out in trenches a foot deep. Put some dung at the bottom, which is to be well forked into the soil within the trench. They may be set a foot apart.

CUCUMBERS.—Those in frames require air and shade during the heat of the day, and regulating the vines to go equally all about the space they have to cover. Those in the open ground only require regulating and pegging down the shoots, to prevent the wind from blowing them about and disturbing them. When the shoots of frame cucumbers get to the extent of the frame, if they be prolific, lift up the frame, and let the vines run outside; if they be not fruiting well, take off the ends.

HERBS.—Gather whatever herbs were omitted last month, dry them in the shade and out of the way of all rain, nor let them be exposed too much to draught. Herbs if dried at all, are worth drying properly; and half of those that are taken to market have grown until they have lost the best of their flavour, and dried until there be hardly any left. Plant sage, mint, savory, &c. Tear down the slips, if you have not any seedlings, and make one plant into a good many.

KIDNEY BEANS may be still planted, if the vegetable be in any demand—a few at the beginning, and a few at the end of the month. Earth up those which are forward.

LEEKS will now transplant to great advantage, as soon as they are large enough to handle. The directions for planting leeks have been already given, and they should be particularly attended to.

LETTUCES may be planted out, and others sown. All kinds of salad may be kept up the year round, with the protection of a frame in winter, and sowing a little each month throughout the year. If some fail, others will succeed, and will rarely fail two months together. Several kinds of lettuce are pretty hardy.

ONIONS may be finally thinned out, and must be kept weeded. Some may be sown, although the principal sowing for winter and spring drawing must be next month. Let the ground you sow on be very rich, for it cannot be too much so. Sow the seed rather thickly, tread them well down, and rake them even. Where they are sown on a large scale, roll them with a small but heavy roller.

PARSLEY.—Thin out the early sowings. In order to secure a fresh and vigorous supply through the winter, sow in a warm spot, where a frame could be placed over it in autumn and winter.

PEAS may be sown again for the last time, and let it be an early sort, they will soon be up and grow fast, and if they tell well, they are worth the trouble. Stake all advancing crops, top the late sorts when about four feet high, and water all with a weak solution of nitrate of soda. The late sorts are generally sown, but the early ones give better chance of a crop. If the sowing be continued very late, they are quicker at maturity.

POTATOES.—Now plant Chapman's kidneys; in the purchase of them, however, be sure you obtain them from an authorised agent, for many are sold that are no more like them in nature, than a Yorkshire red is like an early frame. They should be planted about the middle or end of the month, and treated like other potatoes. They may be taken up in November, and pitted. They eat like a new potato from Christmas to May, and even June, and a considerable quantity is sold during the early months for new potatoes. Earth up all the crops of potatoes, so that their tubers may be well covered.

PARSNIPS will now transplant to great advantage as soon as they have four rough leaves. Plant them six inches apart, in rows a foot distant.

RADISHES.—Continue to sow for succession in a cool, moist situation. If they be much in demand, sow a few once a fortnight. The turnip-rooted kinds do best this season.

SALADS.—Continue to sow nearly every two weeks the smallest salading, such as mustard and cress: half as much seed of the former as of the latter will suffice. Let them all be grown fast, so as to be tender.

Savoys and Winter Greens may be planted out in small quantities, and small ones may be pricked out from the seed-beds, in order to get strength for later planting.

Scarlet Runners should have branched stakes put to them at once, if not already done; they should be from five to eight feet high. . They are all the better for being sometimes topped.

Spinach.—Sow now the winter spinach to continue the supply. This will stand the whole winter, and is used by picking off the matured leaves from time to time, and not by taking the whole plant, as in the round-leaved or summer kind.

Turnips.—Sow once or twice this month, after a shower of rain has prepared the ground. Hoe and clean any that are well up, and clear out every weed; leave the turnips about six inches apart every way.

THIRD WEEK IN JULY.

Artichokes will now be advancing fast to perfection in full-grown heads, which, and the plants together, may be assisted in their present and future growth by occasional culture. When it is the object to have large heads, all or the greater part of the smaller ones, which issue from the sides, should be displaced; but when the small heads are used for culinary purposes, they should be thinned out whilst they are still young. Three or four heads are a sufficient crop for plants of a middling strength, but those which are very strong and well-established may be allowed to produce a greater number. Artichokes, in order to produce chard, should, as soon as the principal crop is gathered, have their leaves cut over about six inches above the ground, and their stems cut as close to it as possible. It is to be observed that in order to produce chard, the plants will be destroyed; therefore, a certain portion of the stock of plants should be set apart for that purpose, and on the supposition that new plantations are made annually to a certain extent, the loss of a portion of the oldest plants will be in conformity with good practice.

Asparagus Beds.—This is a good time for making asparagus beds. Various methods have been recommended for the cultivation of this excellent vegetable, but where it is not grown upon a large scale, we advise the following method to be adopted:—Dig a trench as if for celery, mix half-rotten dung with the stuff that is taken out, and when well amalgamated, enough of the mixture should be returned as to fill the trench; when just level, one row of plants should be put along the centre, and they should be covered with the rest of the stuff, which would form a ridge all along, covering them a good six inches in the centre. Our mode, however, of cutting asparagus is different to that of many; we allow the buds to shoot out of the ground a good four, five, or six inches, and then cut them even with the surface of the bed, and not disturb the ground to get white stalk to it. The flavour is far more delicious, there is much more of it eatable, and though not so marketable, it is infinitely better for families. This method requires no earthing up, and other crops may be grown in the space between the rows. The only thing required if to keep them always clear from weeds.

Beans that are in bloom should be topped, to induce strength in the plant, and consequent fruiting.

Brocoli.—Plant out the last, if possible, this month. Draw the earth to the stems of any that have been planted some time.

Cabbages.—Sow seed on good ground, in an open situation. Prick out small plants from the seed bed to grow into strength. Plant out any that you have strong enough into vacant places. Plant them thickly, so that portions may be used as greens, or rather coleworts in bunches, and then thin the remainder to proper distances.

Cauliflower Seed may be sown towards the end of the month, to be kept in frames during the winter, or to be protected with mats.

Celery.—Earth it up as it grows. This requires to be continually done as the plants advance, and dry days should be chosen for the operation. We believe that it will be almost universally admitted, that celery can hardly have too much water applied to it in the course of its cultivation. Plenty of rich manure, not only at their roots, but also incorporated with the mould used for earthing up, may be considered as means of obtaining moisture, as well as affording nutriment to the plants. The dung should be from six to nine inches thick, and as rotten as can be procured. The great advantage of this method, independently of a great saving of ground, is that if any quarter of the garden be fixed upon, and cropped with celery, it will in two years be completely trenched and manured over to any depth that the trenches may be made, by making them, in the second year, in the space occupied by the mould between the trenches of the preceding season. The facility of earthing up the crop is greater by this method than by the other. When the plants require to be earthed up, take two boards of the same length as the width of the trench, and six or eight inches broad. Place the boards between two rows of the plants, which can be done by a boy; then place them pretty close to the plants, and the space between the boards should be filled up with mould, very finely pulverised by two men, one on each side of the trench. When a sufficient quantity of mould is put in, remove the boards, and proceed to another space, and so on till the whole be completed. We have found from experience that this is the most expeditious method, and the same space of ground will contain more than six times the quantity of celery that is generally obtained by the single drill or trench system.

Cardoons.—Where cardoons are in request at the proper season, and where they were not planted out last month, it should now be done, not later than the third week in this.

Cucumbers.—When it is intended to grow cucumbers through the winter, young plants should be raised now, either from seeds or cuttings; the latter are preferable, if taken from a good variety, as you are certain of having it genuine. If you make up a small hotbed, in which to rear the young plants, be careful it does not get too hot; a temperature of about seventy is a good medium at this season.

Cucumbers for Pickling.—The cucumber plants that were planted in the natural ground to produce picklers, should be now attended to. The vines will have begun to advance, and should be laid out in regular order; but about the middle of the month it will be proper to dig and loosen the ground lightly between the holes of the plants, taking care not to go so near as to disturb their roots. In the course of this operation, draw some earth between and round the stems of the plants, pressing it down gently, with the view of making them spread different ways, at the same time draw the earth up round each hole or patch, in order to form a basin to contain the water which is given in dry weather; and as the runners of the plants advance in growth, let them be trained out in a regular order, and pegged down. This will induce them to push out roots at their joints, and thereby impart additional strength and vigour to the plants. In dry weather the plants must be liberally supplied with water, which, if the season be very hot, should be given every evening.

Endive Seed.—Sow some endive seed to raise a supply of plants for the end of autumn and the principal winter crop. Choose principally the green curled kind for the main crop; some of the white curled sorts may also be sown, and the large Batavian endive, observing, of the green kind particularly, that for the greater certainty of procuring a regular supply all the winter of good endive, it will be proper to sow some seed of that sort at two different times this month.

Horse-radish.—Trench in some horse-radish, laying pieces of the root an inch long at the bottom of the trenches, fifteen inches deep, in rows about as distant as ordinary trenching, dunging the ground well, and thowing it in lightly. Every piece makes a plant, which, if the mould be well turned and pretty free from stones, will be straigh and handsome.

Leeks may be earthed up three or four inches to whiten the lower portion.

Onions.—All that have perfected themselves may be drawn to be stored, leaving them on the ground a short time to ripen and harden. If the weather prove wet, after a day or two, they must be dried under cover on mats or a dry floor.

Parsley.—In the parsley which is growing fast, there are two things to be attended to; first, to pull up all that has not a good curled leaf; and, secondly, to thin the remainder enough to give plenty of room to the plants, which will grow weak and spindly if crowded; the taking away all the poor-looking foliage is called *roguing*. It is better to begin by taking out the worst plants, and to continue taking out the worst until the plants are left in the ground thin enough to do well. Plants six inches apart are quite near enough.

Potatoes.—If any of Chapman's remain out of ground, plant them about the middle of the month; hoe and clean the spaces between the rows.

Salads, such as lettuces of all kinds, small salad, &c., may be sown again. Lettuces, which are large enough, should be planted out.

Seeds of all kinds intended to be sown should be gathered as they ripen, and placed in security where it is dry. Most seeds are better for remaining in the pod till they are required for sowing.

Turnips.—Sow for a good crop, perhaps the last; any of the early kinds will mature the soonest.

Winter Greens of all kinds, such as Brussels sprouts, kale, savoys, &c., should be planted out in all spots that are vacant.

Winter Spinach.—Sow for a main crop.

This must be thinned when it comes up, and, indeed, some plant it out, for the plants must be nine inches apart, and it is used by taking off the leaves as they grow, and not, as in the summer kinds, by using the whole plant at once; the large or outside leaves are picked off for use, and the plant will continue supplying the table the whole of the winter. It is, however, necessary to give it plenty of room. so that when it is up it must be thinned out to the distance mentioned, and constantly be kept clear of weeds.

FOURTH WEEK IN JULY.

Asparagus.—Let the plantations of asparagus be well cleared, and kept at this time perfectly free from weeds, particularly that which was planted in beds last March or April; also let the seedling asparagus which was sown in the spring, be kept very clean by a very careful hand-weeding. A little salt thrown over the surface of an asparagus bed will be found very beneficial.

Artichokes.—Examine now the artichoke plants, both of the old plantations and those planted last March or April. Many of these will now be in perfection, and, besides the principal or top, there will sometimes rise several small lateral beds or suckers from the sides of the stem, but in order to encourage the principal beds to grow a large size, most of these small side shoots, as has been already intimated, may be displaced.

Brocoli.—Prepare some ground to plant out a succession crop of brocoli for winter and next spring supply. An open quarter, not shaded by trees, should be chosen; spread a liberal dressing of rotten manure over the piece, and dig it in regularly. These plants are now to be planted in rows two feet asunder; allow the same distance between plant and plant in the row, and give each plant a little water, repeating it two or three times in dry weather, to forward their rooting, in order that they may acquire large growth before winter; they will produce fine large heads accordingly, some in winter, but in greater perfection in the spring. Draw the earth about the stems of the brocoli which were planted out last month, for this will strengthen the plants, and promote their growth. As brocolies are often cut off by the frost, it is a good plan to plant as many as possible in sheltered situations, that is, where they will have abundance of light and air, and at the same time the protection of a wall or fence from blasting winds. When natural defences, or those of walls, &c., are not available, it will be worth while to apply straw hurdles, and other similar appliances. A little thing is sufficient to break the wind.

Early Purple Brocoli.—The last crop of early purple brocoli may now be sown in a frame, or under hand-glasses. When they are transplanted into the pots, take care that they be potted immediately from the seed beds.

Cabbage Seed.—Sow early and other cabbage seed to produce plants for the service of the ensuing summer; also the large autumn kind to succeed the summer crops, and for autumn and winter supply the following year. The proper early sorts to sow now are the early dwarf, early and large sugar loaf, and Yorkshire kinds; the early Battersea and Antwerp cabbage. The market gardeners about London sow their early crop in the last week of July, caring nothing about a few of the plants running to seed, so that they can have young cabbages as early as possible for market. Sow also the seed of the large oblong, hollow, large round, the drum or flat-headed cabbage, the long-sided and other large late kinds, for a full crop of large cabbages, both to succeed the early and successional month's crops of the smaller kind next summer, and for general autumn service this time twelvemonth, and for several months after. Sow also red cabbage to raise plants for cabbaging in full growth next year in autumn.

Carrot Seed.—Carrot seed may now be sown in a moderate portion, in order to raise some plants to stand through the winter for spring use. Sow some in the last week of this month, but for the main spring crop the sowing had better be deferred till the ensuing month. Let the seed now be sown in beds of light mellow earth.

Cauliflowers.—The cauliflower plants intended to be wintered in frames may be planted or pricked out at once from the seed bed into the beds for the winter, to be covered with frames, &c., setting the plants three inches asunder, or previously pricked into nursery beds the same distance, in which to grow in strength till the end of October or the first week in November, and then to be transplanted into their winter quarters, in four feet wide beds of light, rich earth, in a sunny situation, setting the plants three inches apart, and one or more frames, according to the length of the bed, placed thereon, to be protected occasionally with glasses in the winter months. In one or other of these beds the plants are to remain all winter, and are during that time to be defended in rainy and severe weather by putting on the glasses, but on mild and dry days no covering must be over the plants; they must have the fresh air at all times, and are to continue with this management till the latter end of February, or beginning or some time in March, or some occasionally till the beginning of April, if a cold backward spring, and according to the state of the growth of the plants, then to be transplanted into the quarters of the kitchen garden.

CELERY.—Transplant now a principal crop of celery into trenches: let an open quarter of good ground be chosen; mark out the trenches and prepare them in the manner that has been already directed; select some strong stout plants, trim off long straggling tops of the leaves, and cut off the roots, and then plant one row in each trench. Observe to set the plants four or five inches distant in the row. There is another method of growing celery, which may be described in a few words. A trench five feet wide, and of any required length, is dug about ten inches deep, the earth that is removed being laid along each side. A good coat of rich rotton dung is spread over the bottom, and pointed in. On this surface the celery is planted in crop rows ten inches apart, the plants being dibbled in six inches asunder. This hollow bed is flooded with water as soon as planted, and as the plants advance in growth, are earthed up from the sides until the bed be two or three feet high. Coutinue to earth up the former planted celery as the plants advance in height, which should now be properly attended to in those planted in trenches the two last months. Observe to earth them up a due height on each side; take particular care not to break down their leaves, and not to bury the hearts of the plants. Let the landing up of these plants be repeated once a week or fortnight, according as they shoot in height.

CARDOONS.—The cardoons planted out in May or June, are now arrived to some considerable height, and it will be proper to begin to tie up some, and draw up some earth around the plants, in order to bleach or whiten them, and render the stalks of the leaves crisp, tender, and mild tasted for use; and as they rise in height, let the earthing be repeated.

COLEWORTS. — Examine the colewort plants sown in June, and see where the plants stand thick; let some be drawn out regularly, and plant them out finally into open compartments. Let them be planted in rows, twelve inches asunder, and set the plants six or eight inches distant in the row. By this practice, the plants remaining in the seed-bed will have more room to grow to a proper size for planting out in general, and those which are now transplanted will come into use three or four weeks sooner than the plants which are left in the seed-bed until September.

CORN SALAD.—This is now a good time to sow the seed of corn salad, or otherwise lamb lettuce for winter and spring use, and also the seeds of chervil for the same occasion.

CUCUMBERS.—Go over those lately planted, and thin gradually; avoid impregnation, except for seed; cut back the early plants, and start anew, if not already done. Water all with liquid manure, and shut up with a brisk heat, even so early as two P. M. after watering. The fruit should be cut whenever ready, and their stalks placed in water; and they also keep well if laid on a sward of green turf in a cool shed, and covered with a hand-glass.

CUCUMBER PLANTS.—Cucumber plants also demand attention at this time, particularly the crops which were sown, or planted in the open ground. To produce fruit to pickle, these plants must, in dry weather, be supplied with water, at least three or four times a week. Let the plants be also looked over in a regular manner two or three times a week, in order to gather a sufficiency of the young fruit, according as it becomes fit for the purpose of pickling; for when once the fruit have come to the pickling size, they will soon grow too large for that use. Likewise let the cucumbers of the frames, and bell or hand-glass crops, be also supplied pentifully with water, and they will continue bearing good fruit till the middle of September.

ENDIVE.—Sow another parcel of endive, principally of the green curled for the warm crop, also some Batavian endive. Choose an open situation, and plant them twelve inches each way from one another. Water them as soon as planted, and in dry weather let the watering be repeated once every two or three days, until the plants have taken root. The plants which were planted out in June will now be fast approaching to their full growth, when they should be tied up to promote their blanching. Choose a dry day for this work, and with fresh bass or slender osier twigs, let a parcel of the largest full-hearted be tied up in a proper manner.

LETTUCES.—Plant out a number of the different sorts of lettuce which were sown last month, to supply the table in autumn.

ONIONS. — Examine the main crops of bulbing onions; they will now be nearly fully bulbed. When their leaves begin to fall and wither, the bulbs have had their full growth, and must then be taken up. Let this be done in dry weather; immediately spread the bulbs to dry, and manage them as before directed.

Radishes.—Radish seed may still be sown in order to raise a succession of plants for autumn service. The proper sorts of the common radish to sow at this time for autumn crops are the salmon or scarlet kind, and the short top radish, but preferably most of the former at this season.

Savoys.—Finish planting savoys; plant them in rows two feet asunder, and set the plants at the same distance from one another in the row.

Small Salad.—Continue to sow in succession, several sorts of small salad seed. Such as mustard, cress, radish, rape, and turnips.

Spinach.—Prepare some good ground to sow a full crop of winter spinach, and for early and general spring supply; choose a piece of rich mellow ground that lies tolerably dry in the winter, and open to the winter's sun. Sow the seed, tread it down evenly, and then rake it into the ground. The prickly-seeded, or triangular-leaved kind is to be sown now, for plants of this sort will best endure the cold and wet in winter. This crop will produce leaves for gathering in October. November, and during the winter, in open weather, and all the spring months till May.

THE RASPBERRY.

This shrub, in its wild state, is found growing in mountainous woods and thickets, flowering in May and June. The root is creeping, the stems are biennial, erect, three or four feet high, branched round, pale or purplish, more or less besprinkled with small, straight, slender prickles, frequently rather resembling bristles than prickles, and sometimes altogether absent; leaves primate, of five or three ovate, rather angular, green, and nearly smooth above, very downy beneath, and a large terminal leaflet: the footstalks are furrowed, downy, and prickly, with narrow, lateral stipules. The flowers are small, white, or pinkish white, pendulous, in drooping terminal clusters. Fruit crimson, of numerous juicy grains, beset with the permanent styles, and highly fragrant, with a very deliciously perfumed sweet and acid flavour, more exquisite in the wild state in general than when cultivated.

The wood of the raspberry bush produces fruit but one year; therefore, the old wood should be carefully cut down below the surface of the earth, and the young shoots should be shortened to about two feet high, and not more than three or four shoots should be left to each root, as these will produce a greater number of berries, and larger fruit, than would be obtained if twice the number of suckers were left. The middle or end of October is the proper time for this pruning. The fruit is produced from young branches out of the last year's shoots or suckers. The plants raised by layers are much preferred to those taken from suckers; they should also have plenty of room, for when there is not space for the air and light to pass between the rows, the fruit will be small, and not ripen well.

Raspberries will succeed in all soils and situations; but deep, damp, light, peaty or turfy soils appear to bring them to the greatest perfection. A moderate degree of shade appears also to be beneficial, particularly in dry soils. The raspberry thrives better in a shaded situation than almost any other fruit-bearing plant, and is usually planted in borders on the north side of walls. There cannot be any doubt but that great advantage would accrue to strawberries, raspberries, gooseberries, and currants, the two former in particular, were they planted in a situation where it would be possible to irrigate their roots during the season of the growth of their fruit. The fruit by this means would attain a much larger size, and the blossoms would set better, and in a situation fully exposed to the sun, we question whether the fruit would be much deteriorated in flavour.

Very large fruit is obtained, particularly in moist, rich soils, in which the raspberry luxuriates, by destroying all the suckers or young shoots, that would, if left, produce the season following, thus the whole strength of the plant is thrown into the foliage and fruit, which attain a large size. By this method it is necessary to have two plantations kept in succession, as those which produce fruit this season, in consequence of the young shoots being removed, will be useless afterwards.

American Blight.—The following is recommended by a correspondent as a remedy for the American blight: Mix about seven parts of water to one of vitriol, according to the strength of the vitriol; rub the mixture well into the crevices of the bark, wherever the blight appears.

THE GLOXINIA.

THE GLOXINIA.

The genus Gloxinia forms part of the order Gesneriecæ in the natural arrangement, and in the Linnæan system is included in the class Didynamia, order Angiospermia. The genus was named in memory of Bar. Pet. Gloxin, of Colmar, a German writer, author of a work entitled, *Observationes Botanicæ*, &c. They are natives, for the most part, of equinoctial America, and generally found on the margins of dense woods; the soil of such places, being formed by the accumulation of vegetable matter, is light and porous, and yet contains a large quantity of alimentary matter.

There are three varieties,—*Gloxinia rubra*, *G. Maxima*, and *G. speciosa*, the latter of which has five sub-varieties.

1. Gloxinia Magnifica.—The colour of this flower is a deep flesh colour, or pink, with a pink tube and white throat, and is said to possess a strong and erect habit of growth.

2. Gloxinia Insignis.—This variety has a pink tube, with the spreading segments, or limb nearly white, the upper portion being shaded with the colour of the tube, and the throat assuming a bluish tinge.

3. Gloxinia Bicolor.—This is a deep bluish purple variety, the throat of the flower being whitish, and the upper part of the limb edged with white. These three varieties were raised from the seeds of *Gloxinia speciosa rubra*, fertilised with *Senningia guttata*, by Mr. Carton, gardener at Sion House.

4. Gloxinia Cartoni.—This is a finer variety than any of the preceding. It is a large full-formed flower of good substance; the throat and the margin are both white, the rest of the flower being deep pink, increasing in its intensity near the mouth of the tube. It is a very fine variety.

5. Gloxinia Rose Alba.—A hybrid obtained by Mr. Rendle, of Plymouth, between *Gloxinia speciosa rubra Gloxinia* and *candida*. It has handsome, pale rosy flowers, with a white throat, and possesses a dwarf habit of growth.

The soil in which the tribe seems most to delight is a compost of sandy heath mould, with one-third of writing-sand, nearly pure silex, of a light loam, a portion equal to that of the sand, and double that quantity of black leaf mould, or earth of decayed wood. An inch of drainage should be placed in each pot, and over that a thin layer of moss. One shift should be given in the growing season. The largest tuber will not require a pot above five or six inches wide at the rim. Plants may be kept perfectly green all winter, in the stove, at fifty-five degrees by fire, the Caulescens particularly, and this also will bear cutting down, during summer, to one joint, after the first crop of flowers has passed. During winter the dormant plants must be kept quite dry, and protected from frost. Some will fail, and, therefore, a stock should always be maintained. At whatever period, between December and April, it may be desirable to re-excite the plant, no shifting must be attempted till, by a heat of sixty degrees, a moist atmosphere, and the most cautious watering of the soil, *growth commences.* We have seen twenty plants out of thirty destroyed by shaking off the old soil, and repotting whilst dormant. When the vegetation is established, a larger pot, a little new soil trickled round the ball, and worked along it with a smooth stick, and an entirely fresh surface soil, half an inch deep, with increased watering, will do all that can be required to start the plants into vigorous activity. When in flower, water must be abundantly supplied, and a good plant kept in a room, and not exposed to the mid-day sun, may thus be enabled to develop in the course of three months, from May to July, a series of blossoms, of which from twelve to twenty shall be expanded at the same time, and every one extremely durable.

In drying off, as it is called, the usual supply of water should be gradually reduced —the reduction to commence as soon as the plant has done blooming; it usually occupies about a month to render them perfectly dry and firm, when, if required, they may be taken from the mould, and kept as is usual with other bulbous roots, or what is rather preferable, allowed to remain in the pots, keeping the soil about them quite dry. Whilst in this state, a dry shelf in the greenhouse is the most appropriate place for them. Of course, care must be taken that the earth be not wetted by occasional drips or other causes, to prevent which the pots may be placed on their sides; on any appearance of mouldiness, they should be instantly removed, and thoroughly dried again. The end of February is the most proper time for starting them; they should be first repotted with the soil already mentioned. In planting, the bulb should be pressed in just level with the surface of the soil. As soon as they have made two or three leaves, water may be used without fear, and as they advance in growth, a slight syringing on the foliage will be of service, and may be continued every day till they begin to flower. In this situation they may be kept till the end of May, by which time they will have attained a good size, and probably show flower buds. It will be necessary to admit air to them on favourable occasions, the same as for other plants, and about the time for removing them to the greenhouse, it should be largely increased, in order to render the growth as dwarf and strong as possible. They do not require any repotting, that is, supposing them to be placed in pots of sufficient size at the first potting; those called forty-eights are large enough for moderate-sized roots. When taken to the greenhouse, a light airy situation should be chosen; they do not require any particular management whilst flowering, beyond the usual supply of water, and they continue to produce their beautiful flowers the whole of the summer. This, with the ease with which they may be grown, renders them desirable acquisitions in every collection.

SYSTEMATIC ROTATION OF CROPS.

In the cultivation of the ground, whether in farming or gardening, a proper attention to the regular rotation of crops forms one of the first and principal features of good management, although its beneficial influence has not been fully accounted for by chemists. The *rationale* of rotation is thus given by Sir Humphrey Davy:—"It is a great advantage in the convertible system of cultivation, that the whole of the manure be employed, and that the parts of it which are not fitted for one crop remain as nourishment for another. Thus, if the turnip be the first in order of succession, this crop manured with recent dung immediately finds sufficient soluble matter for its nourishment, and the heat produced by fermentation assists the fermentation of the seed and the growth of the plant. If, after turnips, barley with grass seed be sown, then the land, being but little exhausted by the turnip crop, affords the soluble parts of the decomposing manure to the grain. The grasses, rye grass and clover, remain, which derive only a small part of their organised matter from the soil, and, probably, consume the gypsum in the manure, which would be useless to other crops; these plants likewise, by their large system of leaves, absorb a considerable quantity of nourishment from the atmosphere, and when ploughed in at the end of two years, the decay of their roots and leaves affords manure for the wheat crop; and at this period of the course, the woody fibre of the farmyard manure, which contains the phosphate of lime, and the other difficult soluble parts, are broken down, and as soon as the most exhausting crop is taken, recent manure is again applied."

Gardeners should pay particular attention to the rotation of crops, as far as the nature of the thing will admit; it is a good practice to sow down part of the garden every season in grass. But in all cases where this is sown, let the ground be laid down in as good condition as possible, and the manure laid on will not be lost.

By a rotation of the perennial crops, such as quartering out currants, gooseberries, raspberries, &c., the ground will not only be renewed, but also rested, or at least very much improved. None of these crops need occupy the ground above twelve years, and not less than three; these, together with trenching for the principal crops of autumn-planted brassica, will keep the ground in fresh order, and be attended with no loss of space; for in all large gardens, and the generality of small ones, new plantations of these things should be made to a certain extent annually, which will throw a certain proportion of ground into regular rotation. In cropping all gardens, as far as it can be rendered practicable, rotation should be aimed at; and thus, by keeping all the legumes, the brassica or cabbage kinds the bulbous or onion kinds, and lighter crops, as salads, &c., by themselves, each following in regular succession, the garden would not only look better, but would, to a certain degree, produce the rotation required. In no case should any of the cabbage tribe follow another upon the same piece of ground, nor should peas follow peas, nor beans, beans. Onions are, probably, the only exception in garden culture.

All crops for a few years thrive well on newly turned-up virgin mould; but, in a few years, they degenerate and require a fresh soil. Land, in the course of years, often ceases to produce the most common vegetables, and fields which are well laid down with cultivated grasses, lose every one of them in a few years, because they have exhausted the nourishment proper for their respective sorts, which, consequently, die, and give place to others. This fact is frequently experienced by botanists, to their great regret, for a plant is found in abundance for years in a field or wood, and in course of time wholly disappears.

A change of crops is founded on an acknowledged fact, that each sort of plant draws a nourishment peculiar to itself. On this principle, after a piece of ground has nourished one crop, another of a different description may succeed. It has long been remarked in America, that the forests being cut down, young trees of a different species sprout up in the places of the old ones; and here the same remark, in a great measure, holds good, acacias very commonly making their appearance on land that has once been under cultivation, and otherwise permitted to relapse into a state of nature. From this circumstance, it would seem that trees, like all other vegetables, extract a peculiar substance from the ground, which substance it is necessary should be restored before the same species of tree can be readily grown a second time—a restoration to be effected, perhaps, by such chemical changes in the constituent particles of the soil, as may arise from the cultivation of other species.

Nothing can relieve the soil more than a rotation of crops, judiciously arranged, according to which plants of different habits and constitutions succeed each other. In order to reduce this to practice, we will suppose a quarter of sea-kale or asparagus, the roots of which are large, and have penetrated to a considerable depth, and which have remained in the ground for several years; and, further, that they have exhausted the soil on which they grew of those parts which constituted their principal good, and, in consequence, that they have ceased to thrive; then, instead of replenishing the same piece of ground with young plants of the same kinds, let them be entirely cleared away, the ground dug and cropped with peas, beans, or any of the leguminous kinds, whose roots do not penetrate to any great depth, and they will derive sufficient nourishment, either different to the former kind, or such as the root of the preceding crop was too deep to absorb. In like manner, let the new crop of sea-kale or asparagus succeed some crop of a lighter description, such as any of the common annual culinary vegetables.

From the general richness of the garden ground, and much manure being constantly employed in the raising of garden crops, less attention has, perhaps, been paid to the courses of cropping in the garden than the field. It is, however, as necessary in the one case as it is in the other, and the same principles are applicable to both.

A variety of circumstances, however, conspire to prevent its being so effectually accomplished in the garden as on the farm, such as the smallness of the portions of the ground generally allotted to this object, the vast number of articles which are to be grown, and their great similarity and relation to each other. The following classification may be considered the most proper:—

Brocoli, cabbage, cauliflower, and savoys.

Common beans, French beans, and peas.

Carrots, beets, and parsnips.

Turnips, early potatoes, onions, leeks, eschalots, &c.

Celery, endive, lettuce, &c.

It is found in practice, that celery constitutes an excellent preparation for asparagus, onions, and cauliflowers.

Turnips or potatoes are a good preparation for cabbages or greens.

Brocoli or cabbages are a proper preparation for beans or peas.

Cauliflowers prepare well for onions, leeks, or turnips.

Old asparagus land affords a good preparation for potatoes or carrots.

The strawberry, currant, gooseberry, and raspberry, for the same.

Turnips give a suitable preparation for celery, endive, &c.

Peas, when well manured, are a good preparation for spinach, &c.

By properly attending to all these different points of management, crops of almost all descriptions may be put into the soil, so as to succeed with much greater certainty, and in a much more perfect manner, than is usual in the ordinary method of putting them into the ground.

PROPAGATION OF GERANIUMS BY CUTTINGS.

No plants are more easy to propagate by cuttings than geraniums, but it requires some calculation and observation to ascertain the proper seasons for that operation, when the object is to keep up a display of them in flower during the whole season. In order to effect this, cuttings should be taken off the old plants in August, selecting the shoots that are half-ripened, that is, beginning to change from a green to a brownish colour at their base. These cuttings should be taken close off under a joint, the wound smoothed over with a sharp knife, but no leaves removed, excepting the first, second, or third from the bottom; neither should the remaining leaves be cut or shortened, as is too often erroneously done. The cutting, so prepared, is to be planted in a thumb pot or small dish, one cutting in each pot, and placed in a mild hotbed, from which air is excluded, and kept carefully shaded for several days. When the cuttings are first planted, they should be well watered, and during the period that they are without roots, kept rather damp than otherwise. When they begin to grow, air must then be gradually admitted, and the shading reduced to only the hottest part of the day. In three weeks they will be sufficiently rooted to require to be potted into larger pots, and into light rich soil, that in which they have been struck being white sand, as free of iron or other noxious mixtures as possible. After their first potting, the plants should be set in a cool frame or pit, until they have fully taken with the pot; that is, till they have begun making root, after which they may be removed to the geranium-house, and set on shelves near to the glass. This section of plants will flower in March and April.

The second section of cuttings should be taken off in September, and treated in a similar manner, and these will flower in May. The third section of cuttings, if taken off in January, the old plants being kept for the purpose, should be stuck in a gentle hotbed, or, in want of that, in a vinery, pine-stove, or in any other hothouse. When rooted, let them be potted into large sixties, and gradually hardened, till they can stand in a cold pit, but properly secured from frost till spring, when they are to be kept as exposed as possible, with due regard to their safety, till the beginning of May, when they are also to be taken into the geranium-house to bloom, which they will do till September.

The fourth section of cuttings should be taken off in March, after which the old plants may be thrown away, or kept in a cold pit till the latter end of May or beginning of June, when they may be planted out in the borders, following the same routine with these as with those already noticed, until they have attained the height of eight or nine inches, when they should be topped, which will not only make them close, bushy plants, but also, if the new branches which they make be again stopped, will retard their flowering till November, and in this state they will remain during the winter, till succeeded by those that by their routine will flower in March. It will appear sufficiently clear that those latter sections of plants should be kept during the summer as cool and airy as possible, and be by no means excited either by warmth or regular potting.

Some cultivators who have a demand for geraniums to be in flower during the winter months, adopt the following practice:—Early in May, cuttings of such sorts as are found to flower best by the process are planted in the usual manner, and placed in a moist heat, shaded, and kept air-tight. When rooted, they are planted into sixty-sized pots, and when fully established in them, are placed in a cool, sheltered place, where they can enjoy abundance of air. About the middle of August they are again repotted into forty-eight-sized pots, and such flowers as may appear are cut off, but the shoots or branches are upon no account to be shortened, at least after the beginning of June, for if they were, the plants would not flower in perfection, if at all.

ON THE PROPER ASPECT FOR A GARDEN.

On the formation of a garden, persons are in general too inattentive to the aspect which the situation affords, not considering that the very success of the garden greatly depends upon the proper aspect which it possesses, and the degree of shelter which it affords against the cutting winds from the north and east. The most favourable aspect for a garden should possess a gentle declivity to the south, inclining rather towards the east, so that it may receive the benefit of the morning sun. The inclination, however, should not be too abrupt, for in that case the injury to the growing crops, and to the seed newly sown, would be ruinous in the extreme; a heavy fall of rain would carry the soil along with it, either washing the seeds away, or laying bare the roots of the growing crops. It would be advisable, if the garden be artificially made, to give an inclination not exceeding one foot in twenty, but if the natural inclination of the garden be greater, so that it does not actually present an inconvenient steepness, no alteration should be made. It has been alleged by many celebrated horticulturists that a change in aspect in a garden is in many respects highly beneficial; and that opinion is in some degree actually founded upon sound experimental knowledge. Thus, for instance, for general purposes, a northern aspect should be avoided; but still in summer an aspect of that kind possesses many advantages by retarding the growth of many crops, which would otherwise be brought to seed before they had acquired sufficient size for culinary purposes. Spinach, salad, and cauliflower attain to a degree of perfection in a northern aspect which they would not acquire if exposed to the constant influence of a southern sun.

Abercrombie observes that an open aspect to the east is itself a point of capital importance in the laying out of a garden or orchard, on account of the early sun. When the sun can reach the garden at its rising, and continue a regular influence, increasing as the day advances, it has a gradual and most beneficial effect in dissolving the hoar frost which the past night may have scattered over young buds, leaves, and blossoms of setting fruit. On the other hand, when the sun is excluded from the garden till about ten in the morning, and then suddenly darts upon it with all the force derived from considerable elevation, the exposure then is bad, particularly for fruit-bearing plants, in the spring months. The powerful rays of heat at once melt the icy particles, and immediately acting on the moisture thus created, scald the tender blossoms, which drop as if nipped by a malignant blight; hence it happens that many a healthy tree, with a promising show of blossoms, fails to produce fruit, the blossoms and thawed frost sometimes falling together in the course of a morning. The covering of the hoar frost, or congealed dew, is otherwise of itself a remarkable preservation of the vegetable creation from frosty winds.

The great warmth of low situations, and their being generally better sheltered from the cold north-east winds, and the boisterous south-west winds, are agreeable circumstances, as the north-east winds in this climate are the freezing winds, and the south-west ones, being the most violent, are liable much to injure standard fruit trees in summer, by dashing the branches against each other, and thereby bruising or beating off their fruit; but in low situations the fogs in vernal evenings, by moistening the young shoots of trees and their early flowers, render them much more liable to the injuries of the frosty nights which succeed them, and which they escape in higher situations. Professor Bradley gives a decided fact in support of this principle. A friend of his had two gardens, one not many feet above the other, but so different that the lower garden appeared flooded with the evening mist, when none appeared in the upper; and in a letter to Professor Bradley, he complains that the lower garden is much injured by the vernal frosts, whilst the upper one remained uninjured.

It must be admitted that gardens of considerable fertility and richness are often to be met with on the sides and near the bases of hills; particularly if sheltered from the colder points by lofty rocks, the reflection or concentration of the rays of heat from them rendering the situation peculiarly adapted for bringing crops of the most delicate kinds to perfection at an early season. Aspects of this kind are not only desirable on account of these advantages, but are in general very romantic and picturesque, or may be rendered so by judicious decoration.

RHODODENDRON ARBOREUM, OR ROSE BAY.

This beautiful shrub never rises to any great height, but usually sends off many radical shoots, often growing close and bushy; the bark is smooth, and of a dark olive colour; the leaves are elliptical pointed, smooth, veined, often wood at the margin, and of a shining green colour; the flowers appear in April or May, and like those of *Laurus sassafras* are male and female upon different plants; they appear single, and stand upon short peduncles, and the corolla divides into four oval leaves, which stand nearly erect, and are of a yellowish white colour; the stamens vary in number from seven to thirteen; there is not any calyx, the style of the female flower is very short, and the germen becomes an oval berry, covered with a dark green rind, and separable into two lobes or cotyledons. This shrub is a native of Italy, and other southern parts of Europe, and the first account we have of its cultivation is given by Turner, which was in 1562, when it was introduced into Europe for medical purposes. It is a beautiful evergreen, and is now very common in our gardens and shrubberies. The spicy warmth of the berries formerly recommended them for culinary purposes, and in this way they were very much used by the Romans, and the leaves both of this and the common laurel were frequently used in custards, &c.; but the practice has by most been discontinued since the recent and fatal proof of the poisonous quality was made public; to such we would observe that the common laurel or *Prunus lauro cerasus* of Linnæus differs in every respect from the plant here described, both in its effects and botanical characters. It may, however, be remarked that the deleterious part of it is the essential oil, which requires to be separated by distillation, in order to become an active poison.

The leaves and berries possess the same medicinal properties, both have a sweet fragrant smell, and an aromatic astringent taste. In distillation with water the leaves yield a small quantity of very fragrant essential oil; with rectified spirit, they afford a moderately warm pungent extract. The berries yield a larger quantity of essential oil; they discover, likewise, a degree of unctuosity in the mouth, give out to the press an almost insipid fluid oil, and on being boiled in water, there appears on the surface a thick butyraceous oil, of a yellowish green colour, impregnated with the flavour of the berry. The oil thus obtained may be used with safety and advantage, in assisting digestion, and it has even been thought to obviate the poisonous effects of the laurel.

The laurus of honorary memory, the distinguished favourite of Apollo, may be naturally supposed to possess extraordinary fame as a medicine, but its pharmaceutical uses are so limited in the present practice, that this dignified plant is now rarely employed, except by way of enema, or as an external application. The berries, however, appear to possess some share of medicinal efficacy, and if we do not allow them to be so extensively useful as represented by S. Banhen, Tournefort, Gooffory, and some others, yet we have no doubt of their possessing highly valuable emmenagogue properties, and have often proved serviceable in the treatment of kidney affections.

The illustrious and celebrated Parkinson, in his treatise upon the vegetable creation, has ascribed many virtues to this plant. He relates many cases where cures were performed by the administration of this simple decoction alone, many of which would appear almost incredible, were it not from a source that is to be relied upon. He gave it in the form of a syrup, prepared in the following manner :—Take of the dried leaves of Rhododendron arboreum (rose-bay) two ounces ; berries, after being dried, one ounce ; *Pepatica americana*, liverwort, one ounce ; *Pulmonaria officinalis*, common lungwort, once ounce ; steep all these together over a slow fire in one gallon of water down to three quarts ; strain off, and add, when cold, two pounds of honey, one quart of best French brandy, one and a half pounds of loaf-sugar, and flavour it with the essence of winter green. This has been found highly serviceable in the treatment of coughs, colds, consumption, and all pulmonary disease. The dose is from a tablespoonful, to half a wine glass full, to be taken three or four times a day.

BOTANY EXPLAINED.

1. *The flower cup*, called by botanists the *calyx*, is the small green cup which forms the back to a flower, and out of which the flower itself grows.

2. *The blossom*, which botanists call the *corolla*, and which means, in fact, all the coloured portion of a flower, which in a rose is red ; in a primrose, straw colour ; and in the violet, blue.

3. *The flower or blossom leaves*, which botanists call *petals*, are, in fact, the separate coloured leaves which compose the flowers.

4. *The male organs*, which botanists call *stamens*, are the small heads or grains which stand up round the centre, and within the flower leaves or petals.

5. Those *male organs*, or *stamens*, are composed of two parts, the upright *stalks* which botanists call *filaments*, and

6. The *tips*, which they call *anthers*.

7. In due time the tips or anthers, which are something like barleycorns or seed, and of various colours, but not frequently yellow, or black, burst and emit a yellow powder ; this may be called the *male powder*, or *tip-dust*, but botanists call it *pollen*.

8. In the very centre of the flower in the midst of these *male organs*, stand the *female organs*, which botanists call the *pistils*, many flowers having only one, many others two, three, four, and upwards.

9. The *female organs or pistils* are each composed of three pieces — the base, the middle, and the top or summit. The base always contains the seed, and is, therefore, called the *seed vessel*, but botanists call it the *ovary*.

10. The middle part may be called the pillar, but botanists call it the *style*.

11. The top may be called the *summit* or *the top*, but botanists call it the *stigma*.

12. The *scale*, which is the outer or bark or under circle of leaves, generally under the flower cup, seen conspicuously in pinks, carnations, and picotees, and called by some florists the *sub calyx*. It is, however, better named *a scale*.

The twelve terms, therefore used, in describing a flower, are—

			Called by botanists
1.	The flower cup	...	the calyx.
2.	The blossom	...	the corolla.
3.	The blossom leaves	...	the petals.
4.	The male organs	...	the stamens.
5.	The stalks of ditto	...	the filaments.
6.	The tips of ditto	...	the anthers.
7.	The tip-dust or powder	...	the pollen.
8.	The female organs	...	the pistils.
9.	The seed vessel	...	the ovary.
10.	The pillars	...	the styles.
11.	The tops or summits	...	the stigma.
12.	The scale	...	the scale.

We entreat those who wish to study botany to learn these twelve terms so as to be able to answer any question that may be put to them as to the parts of flowers, before they attempt to compass more.

CULTURE OF ALPINE PLANTS.

Few plants present more attractions to the cultivator than those called alpines. The term, as applied to plants cultivated in gardens, comprehends not only such as are found wild in mountainous districts, but also in low swamps and peat soil. On mountains they are watered during the summer by frequent showers and heavy dews, whilst in winter they are protected from the effects of frost by a covering of snow. In marshy situations, during summer they are subject to frequent inundations and nightly fogs. During winter some are completely under water; others grow amongst sphagnum (moss) near to flowing springs, which are seldom frozen. In both the low and elevated stations, the water being pure and in constant motion, the soil is prevented from becoming sour, although it be constantly moist. Hence the necessity of a peculiar treatment for plants inhabiting such situations.

The subjects of this interesting division of plants may be successfully grown, and more easily preserved, in pots, than by any other mode of culture. The requisite materials for this purpose are peat, loam, and sharp gritty river or pit sand; also some broken pots for drainage; where the soil which is to be used is apt to adhere too compactly, some of the smallest drainers may be sifted out and mixed amongst it, in order to keep it more porous, and allow the water to pass through freely. Most of the species flourish in a mixture of equal quantities of peat and loam, mixed up with one-fourth part of sand; some few require pure peat, with a mixture of sand. The general potting ought to be done in April, when the plants begin to grow. This is effected by first putting one inch of drainers in the bottom of the pots, and a little of the coarse siftings of the mould over them, to prevent the soil from mixing with the drainers. The fine soil should then be used, and be pressed rather firmly about the plants. Many plants succeed best by being again divided, and fresh potted during the summer, allowing the plants to become strong before their flowering season. The best situation for placing a collection of alpines from April to November is in a shady sheltered situation, plunged in sand or other porous soil. They should be kept moist, and to be also in dry weather frequently watered overhead by an engine or watering pot, with a finely perforated rose. In winter the most delicate species should be protected in a frame, open to any aspect excepting the south; during the season, they will only require to be watered sparingly, and this should be done without wetting the foliage or the sand in which the pots are immersed. When grown upon artificial rockwork, the same soil should be used as for potting. If attention to watering these plants frequently overhead in dry weather could be attended to, they would grow more luxuriantly than in pots.

THE MAGNOLIA.

In this magnificent plant we have the evergreen and the deciduous, but with the latter we have not at this time anything to do. Of the kinds proposed to be used in a choice plantation, none excel the Magnolia grandiflora, a beautiful shrub, with large shiny leaves, not unlike the common laurel, only much larger, and with a white bloom, forming, until it opens, a bud as large as a swan's egg.

There are several varieties of the Magnolia grandiflora; all are splendid, and though in reality trees, may be made shrubs by cutting down young. They are of fast growth, and though hardy, at least so classed, they are apt to grow late in the autumn in some places, and, therefore, require to be in high and well-drained situations, for the sake of being forward in their growth. If secured from wind, so much the better, for that is often more fatal than frost to growing shrubs. Any or all of these varieties may be used, and there are hybrids. There is a Japan species, called *Magnolia kobus*, with purple and white blooms, introduced in 1804, and this is classed as a shrub. There are immense trees of Magnolia of various kinds in different parts of the country. There is a lofty wall at White-knights, covered with Magnolia grandiflora, planted when it is said each tree cost twenty guineas. Certainly there is not anything which surpasses a fine specimen of the Magnolia grandiflora in full bloom, whether we look at its noble flowers, its beautiful foliage, or its habit of growth; and though it be out of place here, the deciduous are as excellent in their way as the evergreens are in theirs. Many other evergreens might be mentioned, but we have confined ourselves to subjects adapted for the home plantation, genera, and species calculated to lay out a first-rate place; others there are, and where it is desirable to grow large numbers of kinds, without regard to quality or appearance, they may be used; but for striking effect, great contrast, and richness of foliage, arising out of well-displayed contrasts, the various kinds mentioned are all we should care about for a first-rate place of our own planting.

AUGUST.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN AUGUST.

Auriculas.—Those plants that were not repotted in May must be attended to this month. Small plants that require only shifting from one sized pot to another of larger dimensions, will not take any harm by being immediately shifted, if the compost be in readiness. The latter should be watered occasionally, and kept at the proper moisture for potting, as directed in last month's number. Keep the pots clear of weeds, the plants of decaying foliage, and water them rather freely; they are now on the move for the autumn growth.

Pinks.—The rooted pipings should be now planted out. If the directions which were previously given be properly carried out, success will attend your labours. Gather your pink seed as often as you observe it fit, which may be told by the nose of the pods being of a brown cast; keep it in linen bags, suspended in a dry, airy situation, putting a few small pieces of camphor at the bottom of each, to drive out the earwigs, caterpillars, weevil, and other insects accidentally collected with the seed pods, and which would, if left, consume the seeds.

Carnations and Picotees.—The method of preparing and proceeding with the laying of these flowers was given in our last. The amateur should proceed with the work at every opportunity till completed. The layers will strike freely, if the watering be attended to regularly; that is, not allowing the soil in which the layers are placed to get parched; if kept moderately moist, it is sufficient, now and then slightly moving the surface of the soil about the layers, if it becomes closed by frequent watering.

Dahlias.—Tying up the branches, keeping the ring-pans full of water, to prevent the approach of insects, cleansing them of the green and black fly, and keeping the mulch around them well supplied with water, is all that can be done with these plants.

Alpine Plants.—The collection of alpine plants in pots should now be examined, and any of the more rare divided, if done flowering, in order to increase the stock. Those which have perfected their seeds, or which are in progress of perfection, such as the families of *diabc*, Arabis, and, indeed, most of the plants of the natural order *Cruciferæ*, should be carefully watched, that their seeds may be saved, and a part of each species immediately sown, the remainder to be kept till spring, in order to insure a more positive success. Such plants freely perfect their seed with us; their propagation by other means is not so convenient. Plants of the natural order *Saxifrageæ*, and those which are allied to it in habit, readily propagate by dividing the whole plant, and most of them will increase by such means, whether each piece be furnished with roots or not. Weeds should be carefully eradicated, and great attention paid to render the atmosphere around both humid and temperate at this time, when we have generally our hottest weather. This is only to be effected by water freely and judiciously applied, accompanied with a sufficient degree of shade; but they should not be placed under the drip or shade of trees.

Anemone.—The seed of anemone may be sown almost as soon as gathered. The soil should be rich and light, and they should be carefully kept from damp until they vegetate; the old tubers should be taken up and carefully dried, and laid by in a dry place, until the return of the planting season.

Transplanting Seedling Perennial and Biennial Plants.—Such plants as may have been originated from seed of the above denominations, if sufficiently strong, may be safely transplanted out of the seed bed into the nursery beds, or many of the strongest plants may be removed at once into the situation where they are ultimately to remain. Advantage should be taken of moist days for this operation, but if such should not occur, recourse must be taken to the watering-pot and shading, which must be continued until rain comes, or until the plants be sufficiently rooted.

Polyanthuses.—The slips of the choice kinds made in April may now be transplanted into the beds or borders where they are intended to flower next spring. Allow them eight or nine inches between the plants each way, and, if you pot them, place them in full-sized pots, the bottom being covered with potsherds, or clean roundish gravel. This should be done both with polyanthuses and auriculas, as they do not like stagnated water about their roots; indeed, this rule ought to be invariable for all potted plants. Nothing is more pernicious to plants than stagnant moisture, whether in pots or in the open ground, and, unless for *aquatics*, draining should be carefully studied and practised as far as the case will admit. It needs but a single comparison to be convinced of the propriety of thus draining the earth of plants in pots, which may be made by any one, and will be manifest in a very short time. There is another advantage in laying a handful of clean gravel, or some sherds, at the bottom of pots, which is, that it prevents the worms from crawling through the hole into the soil, and it is well known that worms very much alter and impoverish the earth in which they abound, in passing it through their bodies. The soil in which polyanthuses will thrive and flower in great perfection is a third part brown loam, a third vegetable earth of decayed tree leaves, and a third rotten cow-dung, to which add a tenth part of sharp sand, or very small gravel; a quantity should always be kept ready, but it should never be used without being a year old, and being completely incorporated. In lieu of leaf mould, peat earth, that is, the surface of a moss or muir, may be substituted. The seedlings pricked out from the March sowing, in June, may now also be planted out for good, into beds as above.

Crocus.—Crocus bulbs, for a winter ornament, may now be planted in pans in a cool frame, or if the winter be genial, they may be planted in the open air. It is better not to lift the old bulbs too often, if they can be allowed to remain.

Transplanting Stocks, Rockets, &c., in Pots.—The seedling stocks, rockets, wallflowers, and others potted in June, may now be shifted into pots called sixteens. Water and shade them for a few days, then place them in a well-exposed situation, till taken into the house. Plant them in rich sound earth, not over stiff, The slips of these and of campanulas that were made in March or April, and that were potted out in May, may also now be put into full pots, and the cuttings that were made in May should either be planted out into nursery beds or into small pots, from the first to the tenth of the month, to be again transplanted in October, or in February, if not then well rooted.

Fuchsias.—Shift such as require it, or if they be in pots sufficiently large, use manure-water more copiously than before. Put in cuttings of any desirable kind, and pot them off as soon as they are well rooted.

Making Slips of various Flowers.—Slips of many kinds of fibrous-rooted, hardy perennial flowers may now be successfully planted, either out for good, or into nursery beds or rows. The following are the principal kinds: American cowslips, asters, many species; auriculas, campanulas, carnations, cranesbills, daisies, dog tooth violet, double violets, double catchfly, garden valerian, gentianella, Greek valerian, blue and white hepatica, lily of the valley, London pride, peony rose, pinks, polyanthuses, primroses, ranunculuses, bachelor's buttons, rockets, rose campion, saxifrage, the large double red and white; scarlet lychnis, stocks, many sorts; veronicas, wallflowers, single and double, with many others, according to fancy. If planted into nursery beds about the beginning of this month, in a favourable situation, many of them would be fit for transplanting about the latter end of September or the beginning of October, and in that case would be well rooted before the winter. Others, if not fit, might be delayed till February or March next year.

Geraniums.—The early flowering sorts should now be shifted, using a free or rather rich soil, then cut the weak or misplaced shoots, and stake out the branches. Stop the young shoots of such as are to flower at the usual season, and shift such as require it. Keep the foliage clean at all times.

Saving Flower Seeds.—Those who are curious about saving flower seeds, must now attend to them. Many kinds will begin to ripen apace, and should be carefully sticked and supported, in order to prevent them from being shaken by high winds, and so partly lost. Others should be defended from much wet, such as asters, marygolds, and generally those of the class *syngenesia*, as from the construction of those flowers, they are apt to rot, and the seed to mould in bad seasons. Whenever they are thought ripe, or indeed any others, in wet weather, they should be removed to an airy shed or loft, gradually dried and rubbed, or beaten out, when it is convenient.

Roses.—Remove all the wild shoots from the stocks budded, and secure the shoots of the buds against winds. If the young shoots be yet attacked with the green fly, give a copious syringing of tobacco water until the pest be completely destroyed.

Half-hardy Plants, such as calceolarias, petunias verbenas, &c., should be propagated, to the desired extent, and those cuttings previously struck should be potted off; keep them close until growing freely, and then allow plenty of ventilation; also keep them topped as they advance, in order to induce them to become shrubby: a regular supply of water must be given. If it be intended to keep them in the cutting pots during the winter, the cuttings should be placed thinner, and they should be topped as soon as they are rooted, and should also be hardened off as soon as possible; sow any seeds of those plants which have been saved, using a light free soil, and scattering the seeds very thinly. Give air freely, as soon as they are up, and pot off singly into small pots as soon as they have two or three leaves.

Rhododendrons, Kalmias, and such like shrubs, should be copiously watered, and divested of all their seed pods. Liquid manure will be found beneficial, if they have not yet matured their growth.

Primulas.—Sow a little seed to keep up the succession. Shift those previously in pots, and keep them rather close until they root again.

Cinerarias.—Shift the plants as they advance, and give them a good supply of water. Stop as much as appear likely to start into flower, in order to strengthen them before winter.

Cutting Evergreen Hedges.—Evergreen hedges and borderings may still be cut, but the sooner in the month the better. Indeed, this work should be performed, at all events, before the plants begin their second growth. It should not be delayed beyond the second week in the month.

Propagating Evergreen Shrubs.—Evergreen shrubs are propagated by layers, cuttings, &c. In order to obtain handsome specimens of these, as well as of all other trees and shrubs, we have always observed that propagation by seeds is to be preferred. However, for many purposes for which evergreens are employed, plants originated by laying or from cuttings are generally used. At this season cuttings may be successfully put in, but the sooner in the month the better, that the plants may be rooted before the approach of winter; for this purpose cuttings of the young wood should be planted in a shaded situation, in beds of common garden mould, and as thick in the beds as it is convenient to plant them. The cuttings should not be shortened, nor should any of the leaves be taken off, unless such as would be buried in the ground. The cuttings may be from a foot or more in length to three or four inches, according to circumstances; being well fixed in the mould, and occasionally watered, they will soon emit roots, and by this time next year will be in fit order to plant out into nursery lines, to attain a size fit for planting out where they may be afterwards required.

Myrtles and other evergreens should be regularly, but not too copiously, supplied with water, and should be so placed as to have the full benefit of the sun to ripen their wood.

Violets.—Pot up a few, and place them in a shady situation to form new roots. Water, to settle the mould about the roots, but do not saturate them with it.

Stocks.—It is now good time to plant the Brompton and Twickenham stocks, where they are to bloom next year; but it will be well to pot a number next month, and keep them in frames. Sow the German sorts now, and keep them in frames during the winter.

SECOND WEEK IN AUGUST.

Auriculas.—A favourable state of the weather will afford the amateur the opportunity of proceeding with the repotting of these plants with safety. They have now commenced their autumn growth, and should be attended to directly.

Pinks.—Continue planting out the rooted pipings as fast as you find any ready, if the weather is congenial; and if the ground intended for the blooming beds be disengaged, commence preparing them for the purpose. They may now be digged, laid in ridges, and by frequent turnings, thoroughly sweetened and pulverised; the manures, if added, will also get incorporated with the soil. The seed gathered now must be carefully dried, before being put away.

Carnations and Picotees.—Proceed with laying (if it is not yet finished), or the season will be too far advanced for striking, and the layers will have to remain on the plants through the winter, and become liable to great loss. The surface of the soil in the pots about the layers, should there have been much rain, will have become closed; a slight stirring will be necessary at all times when this is the case, and particular attention should be paid to it.

DAHLIAS will grow rapidly, and require more attention in tying, &c., in consequence of the great increase of the weight of the branches. Close attention must be paid to secure them from the force of the wind. The buds may now be thinned; carefully select the roundest and best-formed ones to flower, and take away the oval-shaped, flat, and otherwise deformed buds.

GENERAL DIRECTIONS.—At this, as at almost all other times in the summer months, the flower-garden requires constant attention, not only in keeping down weeds and grass, and removing the decayed stems and irregular growths, but in filling up every vacancy, as soon as any such occurs, with plants to flower late in the season. For this purpose there should always be a reserve of such plants previously sown, and in a forward state of growth, for placing as substitutes for those which have flowered and gone. The tulip, hyacinth, ranunculus, and anemone beds will require about this time to be filled with greenhouse or other kinds of showy things, to occupy the bare spaces. Persevere in the propagation of flower garden plants, selecting those which accord the best with the situation and object. Let the watering be continually applied, for this is often a most trying month for flowering plants. An application of weak liquid manure will at times be found to be highly beneficial.

TRANSPLANTING SEEDLING PERENNIALS AND BIENNIALS.—Transplant into nursery beds the seedlings of wallflowers, stocks, sweet-williams, carnations, pinks; also columbines, scabiouses, and other seedling perennial and biennial plants, still remaining in the seed bed. When the plants have stood in the above beds or borders about two months, or till the end of October, or any time in November, &c., or the following spring, a number may be transplanted into the flower borders, and other parts of the pleasure ground, in order to remain to blow next year.

ROSES.—The earlier kinds of roses, done flowering, should have all their decaying blossoms removed neatly. Budding should now be expedited. Where the bark rises badly, some manure water should be previously applied, by which the sap will be made to flow more readily. Nothing should be allowed to grow, except just beyond the bud. A shoot may be beneficial, as it draws the sap past the bud, but as soon as it is united and doing well, anything growing beyond it may be broken off or bent down in order to check a little. Cuttings of the smoothed barked kind will strike almost every month in the year; but about the middle of this month, whatever it may be the desire to propagate may be struck in the shade under a hand glass, or even quicker when there is a little bottom heat.

FIBROUS-ROOTED PERENNIAL PLANTS.—About the middle of this month is the proper time to increase many of the double-flowered and other fibrous-rooted perennial plants by slipping and parting the roots, such as the double rose campion, and catch-fly, double scarlet lychnis, &c., &c.

ALPINE PLANTS.—This is a good time to go through the collection of those kept in pots, to divide any that are required to be increased, and to reduce such as are getting too large, and of which a great number are not required, so that the whole collection, as far as possible, may consist of neat, even-sized pots. Three-inch pots are often made to do: five inch ones are certainly quite large enough.

ANNUALS.—Annuals in pots require watering and shading, trimming off their dead leaves, tying some up to sticks to support them, and giving them air.

PLANTS IN BLOOM.—When the directions already given for shifting various annual and half-hardy sub-shrubby plants into pots of somewhat larger size have been properly attended to, there will be little other attention required besides the due application of water. It is absolutely indispensable that the operation of watering should be assiduously performed, for on it depends very much of success. Plants, unless regularly as well as liberally supplied with water, will absolutely suffer from want; and this will cause the leaves to turn yellow, and the flowers to fall off, or come small and imperfect. When the pots are getting full of roots, and the plants are required to keep growing on for some time to come, a little weak, clear manure-water may be used to great advantage.

HYBRIDIZING.—The height of summer affords a good opportunity for hybridizing any annual flowers which may be thought likely to improve under the operation.

STOCKS.—Fine double stocks of the dwarf kinds are always desirable, and become especially so in the month of February. For this purpose, sow seeds of the intermediate variety now, and let the young plants stand exposed out of doors till the beginning of November, or until they are liable to be injured by frost; then place them in frames, and remove them to the greenhouse in succesion. The same plan may be adopted for an early supply for the borders.

WALLFLOWERS, SWEET-WILLIAMS, and similar flowers should be planted out, if large enough, where they are to bloom; or, if small, pricked out in nursery-beds. Most of these look best in masses, and may be planted in that way amongst annuals and other plants, which must now soon be cleared off.

HYACINTHS.—Prepare the soil for the beds, in which the young stock and the blooming roots are to be put out. If more attention were paid to the growing of these roots, we should not be obliged to place so much dependence on the Dutch florists for a supply.

LOBELIAS.—In order to have these in perfection, they must get plenty of moisture, for they are subacquatic plants.

RANUNCULUSES require treatment in all respects similar to that recommended for anemones.

PERENNIALS FROM SEED.—When it is desired to raise these from seed, instead of cuttings or layers, the object is to get them up in time to gain sufficient strength by the winter. There are hardy perennials which will sow their own seed, and grow like weeds; but they are in general so easily propagated by parting their roots, that those only of which new varieties are wanted, are in general sown. However, the seed may be sown at two periods of the year; the one directly it is ripe, the other in the spring. The process of autumn sowing depends upon a mild winter, that of spring sowing cannot fail. If you desire to sow in autumn, the seed should be thinly sown on a spot which can be covered with a frame and glass, and then there will not be much difficulty. The covering with the glass at night, and not uncovering it whilst there is frost, will secure it very well, until it is large enough to plant out in the spring, but there is little gained by this, because many kinds will bloom as well after spring sowing as after autumn. In fact, there is sometimes a struggle between the plant and the season to bloom just at the close of the year. As soon as they are large enough to manage well, they must be placed six inches apart, in rows, a foot from each other. Here they must stand till they have made their year's growth, which will be considerable, and this completed, they may be removed to their places in their beds or borders they are permanently to fill. Most of them, if not all, will bloom the year after sowing, if the sowing be in spring, and some persons who are rather choice of sorts, will allow them to flower in the bed in which they are first transplanted, and only remove the best when the bloom is over. This occupies two seasons instead of one. It is far better to remove all you want for your borders, and then at or after blooming time remove only the objectionable ones, and at the proper season fill their places with others, which you may have preferred in the bed.

AMARYLLIS.—When the different amaryllises are ripening their leaves, which will now generally be the case, the bulbs should be gradually dried off, and set away in a dry place, not too warm. As they are wanted to come into bloom, put them afresh in a mixture of loam and peat, and remove them into the stove to start them. Unless the bulbs be strong, and were well matured in their growth the previous year, they will not usually produce flowers.

GERANIUMS.—The geraniums that have done blooming may now be cut close in and be turned out of doors, in their pots as they are, in any part of the garden, or if you want them to grow bushy, you must cut them into some little form. The cuttings may be prepared by dividing them into small pieces, the bottom close up to a leaf or joint, and two eyes left above the soil, so that a piece with three joints, one at the bottom and two above ground, will make an excellent plant; and whichever eye begins to grow best may be left on, and the other taken away. If the top one grows best, rub the bottom one off; if the bottom one grows best, cut the geranium down to it. This, however, may be done when they are first potted after striking: and in potting them, put the plant in low enough to bring the bottom leaf of the shoot close down to the soil. Therefore, if the top eye or shoot be the one saved, the stem must be sunk down to it. Any time in the month will do to take cuttings off to strike: indeed, a geranium will strike at any time of the year, and almost under any circumstances.

STOVE PLANTS.—Those who wish to propagate stove plants of any kind, may now take off cuttings, and strike them under a bell-glass in pots, plunged in the tan, and shaded with a paper over the glass, during the heat of the day. Plants out of flower, that is to say, which have done flowering, and are about to make growth, may require shifting into larger pots. This may be seen by turning out the balls of earth, and observing whether the roots be matted round the pot. Specimen plants growing up for size should be shifted every time the roots fairly reach the side, and before they are matted together; for directly this begins, they lose growth, and by a continuance of it, and a little neglect in the watering, a premature bloom would be the consequence.

Clip Hedges.—Now clip or trim hedges. All sorts may be clipped, such as holly, yew, privet, horn beam, elm, lime, thorn, and all other sorts; also those hedges which are but clipped once a year, because such hedges as are trimmed now will not push any more shoots of importance this summer; so they will not want cutting again till next year. But such hedges as were clipped in the middle of last month, or before, will want clipping again in the middle or latter end of this or next month at the farthest.

Gathering Flower Seeds.—Flower seeds, whether annual, biennial, or perennial, should now be carefully gathered as they ripen, where the intention is either to propagate rare or curious species, or for the purpose of sale. As each species ripens, they should be carefully collected and deposited in bags, if the quantity be considerable, but if small, into small paper packages; in the former case, having the name carefully written on a wooden or paper label, and put into the bag for greater certainty. Upon the outside of each bag the name should also be written for the greater convenience of ascertaining the different sorts. Those which are in smaller packages, should have their *generic* and *specific* name also written upon the outer side of each packet. As they are collected and sufficiently dried, they should be laid by in the seed room or other dry place, till the season of sowing; however, they should be occasionally examined, to see that none have been laid by in a damp state, which, if not detected, would soon destroy their vegetative powers. The saving of flower seeds is seldom carried to any extent in the gardens of private individuals, neither would any return be adequate to the expense and trouble of collecting and curing, as the majority of them can always be purchased much cheaper than they can be grown and saved. We, however, here allude to such kinds as are either curious, rare, or interesting to the owner or manager of the garden; indeed, the cultivator of rare or curious specimens will always find ample employment at this season. The production of hybrid or mules is a favourite pursuit of many, and the progeny thus produced often, in some species, participate of the character of both plants, and those seed vessels which may have been thus operated upon, should be distinctly marked when gathered, and their future merits ascertained.

THIRD WEEK IN AUGUST.

Auriculas.—Repotting of these plants, if not already accomplished, should not be delayed. Clear them of decayed leaves, and give them occasional moderate watering; while growing, they require a greater supply than during their dormant state.

Pinks.—If the pipings are not all planted out, proceed with them as directed in last month's number. Those that have been planted out some time, and are established, should not be watered too freely; they grow more sturdy by being kept rather short of water, than otherwise.

Carnations and Picotees.—The seed of these flowers will soon be ripening. The caterpillar and earwig are very active in pursuit of the seed; tying the pods over with coarse muslin, will preserve them from these pests. The compost for potting the layers should now be prepared; it ought not to be of a rich quality, but of a sandy and open nature. Light maiden earth or sandy loam is best for this purpose, with one fourth of thoroughly decomposed manure, or vegetable mould, and one eighth of road-sand, but more of the latter material will be required if the other soil is not of a sandy quality. Mix, and well incorporate them by frequent turnings, which will sweeten and render it fit to receive the tender fibres of the newly rooted plants; stir the surface of the soils at all times when you observe it closed by heavy rains or frequent waterings.

Dahlias will now begin to produce some fine blooms. The instructions given last month contains all that can be done for them this season.

Perennial Seed.—Perennial seeds may now be sown, and will grow sufficiently by the end of October, or the beginning of November, to plant out in nursery beds, in order to acquire strength. Most persons, however, plant in June and July, to get strong plants before the winter, so as to plant them out where they are to flower, before the winter sets in; but in a good ground and a good situation, they will grow quite large enough before the end of November, to secure a good bloom in the spring.

Bulbous-rooted Plants.—These plants yield seed plentifully in a general way, and it may be sown as soon as it is ripe. This month, for instance, is a good month to sow the seeds of all kinds of lilies, tulips, hyacinths, irises, crown imperials, narcissuses, crocuses, and the like. Sow in large pots, cover a quarter of an inch thick, place them in a cool frame until they germinate, which will be in spring. They will do equally well in the open ground if undisturbed, where they may be raked in well, and a little light earth be sifted over the whole. There they may remain all the winter, but if it be very severe, put a little pea-haulm over the beds, which is the greatest protection there can be against frost and its bad effects.

ROSES.—Those buds which have united, which may be seen to be doing well, may now be loosened; that is, the ties removed, and be again tied, so as not to confine them so much. The growing part of the stock must be cut off, in order to give the buds the benefit of all nourishment. It will not do to cut all the branch off that is beyond the bud, because it might die back; but the shoots of the stock must be taken away as fast as they come, so also must all shoots which come from the stock, whether on the stems or on the branches on which the buds are inserted, or from the roots. Until the buds be established, it may be prudent to let one shoot remain growing beyond the bud, in order to create the proper circulation past the bud. Budding may still be proceeded with as long as the bark of the stocks will rise. Seedlings that indicate novelty may be large enough to bud from this month, even those of the spring sowing, though it be not often the case, but of course those of last year are, and they are also developed enough to show their habits, and to bud, if necessary. Those which are smooth skinned, or show anything like the choice breed about them, should be budded on strong china stocks. Cuttings of all the sorts may be put in under a hand glass in a shady border, or if very choice, they may be put in pots and a bell-glass over them, so that they may be in the house and be placed in the shade. Struck cuttings and seedlings not already out may be potted off, and placed in a frame till established. Pruning back the branches, which have done their work of flowering, may go on as before: always cut back to the next strong eye. A constant examination of the rosary, to see that no stocks are growing, and that no suckers are springing up, is very necessary from the rapid growth they make always at the expense of the buds or the head. If the roses be infested with the green fly, syringe then on a still evening; this will knock a great many off, and disturb the rest, and if repeated two or three times, it will effectually rid the trees of these pests. The ground should be stirred up at each watering, so as to bury those that fall.

AMERICAN PLANTS require some care now. Those which have been perfecting their growth should be kept dry, in order to grow solidly to the wood, whilst the others should be encouraged as much as possible.

RANUNCULUSES AND ANEMONES.—Although this is too early a season for planting bed-flowers, yet preparations should now be made to get the beds in order for the reception of those tubers and bulbs in the next or following months. A first step is having the beds deeply trenched, not less than three feet, if the staple of the soil will allow, and upon a dry subsoil. This depth is thought necessary, not because the fibres of these plants ever reach so far downwards, but to allow of the ascent of that warm vapour which is ever rising from the bowels of the earth. The compounding of the different materials of the bed should also be done at this time, so that the whole may be properly settled before planting. The ordinary method of making beds is by trenching as before mentioned, and about eight inches from the surface, to lay a stratum of strong loam and rotten dung well mixed, and on this a layer of lighter loam to receive the tubers. Thus the bed lies till the time of planting.

ANNUALS may be sown to stand over the winter in the beds and borders; so, also, may they be sown in a sheltered place to be planted out in spring; but those which stand the winter where they are sown, flower earlier and stronger and better than those planted out. Some of the kinds usually planted out in spring may be sown under a garden-frame and lights, so as to be protected from hard frosts, and from that which is frequently more mischievous—excessive wet. Hemophilla insignis and other varieties of the same plant make an excellent stock-plant in pots. Mignonette, ten weeks' stocks, Indian pink, German wallflowers, and many other subjects, are sown in pots, kept in a frame till spring, and then plunged or planted out in the borders or beds.

PANSIES may still be struck under common hand-glasses, but they must be well covered to protect them from the changes of the weather. The choice sorts may be struck in a frame, with a little bottom heat to assist, but it is quite unnecessary, except to hasten the striking a little, which is often desirable with new varieties. Those in old beds may be cut down pretty close to the ground, and earthed up a little, when they will throw up plenty of shoots, which may afterwards be torn off with roots attached to them, and fit to plant out. Pansies already struck may be formed into new beds, and will be ready for very early flowering in the spring.

CHRYSANTHEMUMS must now be repotted;

keep the plants in a warm situation out of doors, and watered when the sun shines on them. This, though highly injurious to any other plant, will be found beneficial to them.

Geraniums.—As geraniums go out of flower, cut them down and propagate from the cuttings. Repot them at the time they are pruned in; they may be usually put into a pot something smaller than those in which they flowered.

Balsams, Cockscombs, Amaranthus, and other tender annuals, should still continue to fill all the vacant spaces, and in order to preserve them in bloom as long as possible, all decaying flowers should be removed, as also as much of the seed as can be spared; give them a good watering once or twice a week with liquid manure.

Cacti and other succulents should now have a full exposure to the light and sun, in order to enable them to expose their new stems, and to form flower buds for the next season.

Perennials that have gone out of bloom, may be parted, either by taking off portions of a large patch with the spade, so as not to disturb its main portion, or by digging up altogether, or chopping or tearing it to pieces. The smallest bit with the root, and in many cases without a root, will grow. Where, however, they are in a border, and have spread out large, it is the better way to cut off with a spade all but the quantity you wish left. It is a good plan, because the portion that is left is the better for the removal of the rest. The portions cut off may be parted into as many pieces as are wanted, and planted out in nursery beds to grow. But if you have any other borders to ornament, the pieces may be left large enough to make a good show, and be transferred at once to the place on which they are to bloom. This treatment applies to almost every perennial subject on the borders, and cannot be too well looked after with all the plants you wish to increase.

Polyanthuses may still be taken from the seed bed or the seed pots, and planted out in a sheltered border, where there are no slugs; for if there be any, immediate steps must be taken to get rid of them. A strong border of lime will keep them off altogether, if they be not in the bed itself, ; but if they be, the remedy must be prompt. The border of lime must be placed to keep off all comers, and cabbage or lettuce leaves must be laid over the bed to attract those already there. In twenty-four hours pretty nearly all that are in the soil will be attached to the under part of the leaves, and this repeated two or three days will clear it altogether. The lime, however, must be laid down fresh every now and then, as rain deprives it of its efficacy or pungency, and the creatures can then crawl over it with impunity. This being well looked to, the seedlings may be planted out six inches apart all over the border, and watered in to establish the mould about their roots. If the soil be naturally poor, water occasionally with water in which decayed cow-dung has been mixed, to the amount of a good spadeful to six gallons, and well stirred up, so as to spread over the bed in watering, and not to settle at the bottom of the vessel.

Fuchsias are still in bloom, but it is a very good time to take off their young growing shoots, or to cut in the plants, and put all the cuttings in for increase. They may be crowded into a pot of common earth to endure the whole winter, if they be likely to be wanted to bed out, but nothing should be increased wantonly. It is a great evil to be overstocked; therefore, all increase should be limited to the objects you want, and the number you require of the subject.

Calceolarias in pots should have their side shoots or offsets taken off with the little roots attached, and be potted in large sixty-sized pots, in light good loam and dung, perfectly rolled, and these in equal quantities. The old plant should afterwards be earthed up; but as the present mode of showing encourages the size rather than the beauty of the plant, and the number rather than the size of the flowers, you must act according to the intention which you have in view. If we had to advise florists, the public should never be indulged with size at the expense of consistency. The herbaceous calceolaria, like the polyanthus, the auricula, and twenty other fancy flowers, could be spread so as to fill a peck measure, and for aught we know a beer-cooler ten feet in diameter. They keep throwing outside shoots from the root, which spread out until, by the mere process of parting, they would form scores of plants. How, therefore, people can show large patches of calceolarias, formed of a score or more rooted plants as single specimens, we know not. The proper way of showing them would be to take off all side shoots, and use them one year old as pinks. But shrubby calceolarias should, like geraniums, have but one stem next the ground, and all their branches should be started fairly above; the side shoots, therefore, of these, and many other similar plants, should be taken off for increase, if with a root to be potted directly, and if without it, to be struck under a glass; the old plants to have fresh top-dressing.

SEEDLINGS of all kinds, when large enough, should be planted out into pots or pans, in order to give them room to grow, and eventually they may be potted into sixty-sized pots, there to grow until they have filled the pots with roots, when they must have a size larger; those seedlings that were potted out earlier, and have filled the pots with roots, must be shifted into pots of forty-eight size, and placed on the shelves where they are least in the way, or they may be removed into pits.

BOX AND OTHER EDGINGS should be trimmed, dressed, and mended. Nothing has been the cause of so much discussion or so much labour as the subject of edgings, and the edgings themselves when adopted. Box is unquestionably the very best of all plant edgings; it is cleaner, neater, and more effective than anything, but it has its disadvantages. Slovenly gardeners sweep all its beauty away, clearing the gravel walks; idle gardeners allow it to be the harbour of refuge for snails, slugs, and other vermin; careless gardeners spoil it and make gaps. when digging the beds and borders; but all this stands for nothing, whilst neat and cleanly and handy gardeners can be found, who preserve hundreds of yards of box in all its natural beauty and elegance. There is no substitute for it worthy of a favourable mention; where there is a gap, fill it up, trim it all over alike, and never be afraid of the shears.

FOURTH WEEK IN AUGUST.

AURICULAS.—Pick off the decayed leaves; move the surface of the soil now and then, if you find it getting close, and water them moderately.

PINKS.—Finish planting out the latest pipings; keep the surface open between the rows of those that were planted out early, and prepare the beds for the reception of the plants intended for next year's blooming.

CARNATIONS AND PICOTEES.—The time for potting the layers will soon be at hand, and every necessary should be in readiness, the soil properly sweetened, and, if the weather be wet, protected from the rain, that it may be in proper condition for the young roots to work in. If your pots have been used before, they should be washed before taken for this purpose, and a good supply of crocks for drainage prepared also. The most handy tool for taking up layers is a glazier's putty knife, but any like instrument will do as well. A sufficient number of pots should be filled to the depth of an inch with crocks, and then to within half an inch of the top with the prepared compost, striking the pots once or twice on something firm, to settle the soil in them. In commencing, carefully hold down the layer with your left hand, while you draw the peg with your right, for sometimes, in drawing up the peg, the layer will come with it, thus breaking off the roots. The peg being removed, if you find the layer rooted, sever it from the old plant. Then holding the layer with your left hand, lift it with your knife, with as much of the soil attached as possible. Cut off the superfluous stem up to the rooted joint, and placing it carefully in the pot prepared, press the earth gently to the neck of the plant that it may stand firm, and proceed in the same way till you have finished the whole. Remove the newly potted plants into a frame, and if the sun be out, shade them, but do not water till the evening, when you may give a slight sprinkling over the plants, and on the following evening repeat it. They should not be saturated with water at this stage of growth, they draw root much quicker when only moderately moist. It is customary to put a pair of plants in each pot of forty-eight size, but the system practised upwards of a hundred years ago, is still the best, viz., a single plant in a sixty-sized pot; they will take a third more room, but are much more convenient. If you have a sickly plant, you may remove it under a hand-glass, and give it a different treatment to that required by a healthy plant, which may happen to be in the same pot.

VERBENAS.—A list of a few of the best verbenas in cultivation at the present time: the first seven on the list are extra-fine varieties:—Incarnata perfecta, a shaded flesh colour, the most perfect grown; Eliza, rosy red; Aurora, salmon colour; Lady Prudhoe, bright rose colour; Speciosisima, bright red, with yellow eye; Ramona, rich maroon, with white eye; Antagonist, rosy red; Hebe, shaded lilac with primrose eye; Emma, deep purple; Array, bright red; La Reine, deep pink with dark centre; Boule de Feu, brilliant orange scarlet; Lady Pakenham, bright purple, with dark eye; Turban, shaded purple; Duke of Cornwall, dark scarlet, with fine dark eye; Emperor, rosy purple, with white eye; Duke de Nemours, rosy pink, with white eyes; Climax, shaded pink with light centre; Wonder of Scarlets, very deep scarlet; One of the Ring, reddish maroon; Coronet, purplish lilac; Cyclops, pink, with white eye; Delight, shaded French white Sir R. Peel, rosy purple, with white eye; Woodii, bright purple; Imperatrice, blue; Mountain of Snow, the best white.

DAHLIAS.—Keep them well supplied with water, liquid manure over the mulch now and then will be of great service. The foliage of the plant should be sprinkled every evening, thin out the buds, leaving the roundest and best formed to bloom, and attend well to the shading of the forward blooms.

SEED-BEDS FOR FLOWERS.—The beds should now be prepared for the several kinds of flowers to be raised in the open ground from seed; upon the due choice of the place, and management of the ground now, will in a great measure depend the success. Let a large quarter of the garden be selected for this purpose; let it be open to the south-east, and defended from the north by a good fence, and sheltered moderately from the noonday sun. Divide this into as many beds as there are to be kinds of plants, and let these be three feet and a half broad, with small alleys between, and as long as will fit them for receiving the seed. Dig away the earth in each bed half a spade's depth, and when this is removed, break the bottom very well with a pick-axe, and rake it smooth, drawing off all large stones and clods; then mark the first bed by a numbered stick, fixed down firmly, and bring in the mould for the plant intended there to be raised. Let this rise two inches above the level of the alley, and rake it smooth. In this manner make up every bed, the marked stick serving for a notice of the kind of plant. When all the beds are made up, let them lie five days to settle; then draw off as much from the surface as will serve afterwards to cover the seeds a quarter of an inch, and then scatter them on. Sift over them the mould reserved for that purpose, and spread over the beds netting or bushes, to prevent the depredations of cats and other destructive animals and vermin. After this, let them all be managed in the same manner. Let them be gently watered, if at any time the mould appears too dry; and when the young plants appear, let them be kept clear from weeds, and at times also be watered.

ANNUALS IN POTS.—These will require frequent waterings, and it will now be time to mark those intended for seed. These must not be suffered to exhaust themselves by too many flowers; they must be placed in a warm spot, and removed under shelter every evening.

LILIES.—The roots of lilies should now be removed; their flowers in general are past, and the stalks and leaves faded, but they will not bear to be kept long out of the ground; they must be just taken up, cleaned, and planted again in fresh mould.

HONEYSUCKLES.—Honeysuckles of the various kinds will succeed well from cuttings, planted in a bed tolerably well exposed; at this time the layering of honeysuckles is more troublesome, and the cuttings with tolerable management will succeed well.

BULBOUS ROOTS.—Beds should now be got ready for the reception of hyacinths, tulips, ranunculuses, anemones, &c., where they are to be planted in masses. For this purpose the ground should be dug or trenched two feet deep, breaking the mould fine, and laid out in breadths of convenient dimensions. When the beds are prepared, the roots should be planted in lines across, and at depths according to the kinds planted; the two former requiring to be planted deeper than the two latter. It is always better to plant bulbs too shallow than too deep, as this can be remedied at any time, by surfacing the beds with a portion of prepared mould, whereas if they be too deeply planted, they cannot be so safely uncovered of the superabundant mould, without endangering the buds of the bulbs. Where bulbs are to be planted in patches, or singly in the borders of the flower garden, the spots being marked out should be loosened up to the above depth, particularly if the soil be strong and adhesive, but where of a sandy, light texture, one foot will be sufficient. In the former case a portion of vegetable mould or sharp sand should be added, to correct the stiffness or adhesiveness of the soil. When planted, neat pegs should be placed in the centre of each patch, to serve as a guide in digging or hoeing the ground afterwards, or until the plants come up, that they may not be destroyed.

SWEET-WILLIAMS.—Take off and pot the layers of the finer kinds of sweet-williams, and that done, look to those of an inferior kind, which are intended for the open borders in the flower garden. These will now be sufficiently rooted to remove with safety, and they may be either planted in the borders or in a bed purposely prepared in the nursery; it is immaterial which, for they have to be removed again in the autumn. The more regular plan is to plant them out in a nursery bed, but they make no ill figure upon the borders, and they will stand the winter the better, the less space they have to be removed afterwards. In that method of planting them at once in the borders, they will only need to be taken up and put in again, when the ground is dug up in October. In this case they strike root again immediately, and having no check, they will flower much better the next season.

BULBS PAST FLOWERING.—As the bulbous-rooted plants, first planted, will now be finished flowering, and their leaves beginning to decay, they should be carefully taken up, and stored in a dry airy room, until the season of planting arrives. It is not requisite that all bulbous-rooted plants be taken up annually, but it is necessary for all the finer sorts, in order that the roots be examined, and the offsets or young roots removed, which is the mode by which these plants propagate themselves. Besides, the bulbs being taken and kept in a dry place, have thereby a respite from action, which respite can be lengthened at the pleasure of the cultivator. Bulbs so treated are supposed to flower stronger than if they were left altogether in the ground. Whether this be the case or not, it is an important feature in their cultivation to take them up annually, and the less valuable ones in two, three, or four years, according to circumstances, in order that their offsets may be taken off for increasing the stock, as well as preventing an unnecessary number of plants from springing from the same centre, and thereby becoming so weak that the flowers, though numerous, would be good for nothing.

STOCKS.—It is now the proper time to plant the Brompton and Twickenham stocks, where they are to bloom next spring, but it will be well to pot a number next month, and keep in frames. Sow the German sorts now, and prune them in frames through the winter.

ALPINE PLANTS IN POTS.—Many of the more delicate Alpine plants should now be placed in the Alpine pits or frames, where they are to be wintered, as the season is now approaching when damp and a superabundance of rain cannot be guarded against. Damp is certain destruction to most plants, which are natives of barren or rocky situations, and those in a state of cultivation are more liable to its ill effects than those which are in their native soils. It will now be necessary, therefore, to place the more rare, and such as are likely to be injured by much damp, in the frames; but here they should not be covered, unless in times of rain, or else they will be drawn up weakly, and their vegetative powers excited at a season when they should be at rest. Those which are less delicate, when they appear damp should be laid over on their sides to drip until they are dry, and then replaced in an upright position Worms will now be troublesome to them, and to all plants in pots; they can be easily destroyed by watering the whole over with lime water, or the pots in which they appear to be inverted, and the plants taken out with the ball entire, when in most cases the worms will be detected scarcely covered with mould. Those who are partial to these humble and interesting plants will not consider it a task to watch over their welfare from this time till the return of spring, when their attention will be amply repaid by the elegance, perfection, and simplicity of their varied blossoms.

POLYANTHUSES.—The seedling polyanthuses will now be in a condition to remove, and the same mode of management is to be observed as with the primulas in general. They must be set with great care, and the surface well closed about the root; after this, they must be watered once in two days, and a careful eye must be kept upon them, to see that they continue as planted, and that their roots remain well covered.

FRENCH MARIGOLDS, AND CHINA ASTERS.—It is too common at this time to see marigolds and China asters in the garden weak, stunted, and half starved. Where they are the weakest and worst, they are constantly most infested with insects. Guard against them in time, by bringing the plants forward with due care, allowing them sufficient room, and when they are brought into the open air by opening a hole sufficiently large' and disposing the earth well about them; after this, frequent waterings, and the application of water that is of a due temperature, are the most essential requisites. Plants of these kinds will always be stunted by watering with a pump, worse than by neglect of watering, and whenever nature has received such a check, the juices are vitiated, and the plants degenerate.

SEEDLING PLANTS.—Continue the care of those seedling plants of the tenderer kind, which are to take their growth in the greenhouse. Those which have been removed into larger pots will require shade and water till they are rooted, and those which are yet in the small pots, into which they were planted from the seed bed, must from time to time, as they grow to due size, be transplanted and rooted afresh with the same care. Particular care must be taken to bring the whole ball of earth with them, and to trim round the extreme fibres which appear on the outside; then the ball must be set upright in the larger pots upon a small quantity of mould laid in for that purpose, and the rest filled in till it is brought up half an inch above the surface of the ball from the smaller pots; after this, our attention must be paid to watering and shading.

Perennial Plants (Transplanting).—Continue to transplant into the borders, where they may be required, all herbaceous plants propagated during the season, as they become sufficiently strong, but those which are not now sufficiently stout, should be left till spring, for if they be now planted, they may not be sufficiently established before the winter, unless the autumn should be mild. Those herbaceous plants which may have finished flowering, and overgrown the bounds prescribed for them, may be divided or reduced in size, and planted out where they are to remain.

Transplanting Flowering Shrubs.—Many hardy deciduous flowering shrubs may be planted, particularly such as may have shed their foliage, or finished their year's growth.

Transplanting Flower Garden Plants.—Those plants which may have originated from seed, cuttings, or by other modes of propagation, may now be planted out; the strongest where they are to remain to bloom, and the weaker or superabundant ones into nursery beds, to gain strength and become a reserve stock for future supplies. Advantage should be taken of moist days for this purpose; indeed, it is in all cases better to defer planting for a few days, than to plant when the ground is dry and the sunshine powerful: artificial watering is not equal to the watering of nature.

Propagating Herbaceous Plants.—Continue the propagation of herbaceous plants, either by the process of the division of their roots, or by sowing seeds which have been saved during the season. Some of the more rapid growing sorts may be propagated by cuttings, but the sooner the operation is now performed the better, in order that the plants may be sufficiently rooted before vegetation wholly ceases. Such plants as may be out of flower, and whose flower stems are decaying, may be divided at the root, and, if sufficiently strong, planted out where they are permanently to remain.

Chrysanthemums.—Shift as requisite, and stop the shoots where necessary, but not later than the latter end of the month. Peg down more layers into small pots, and keep all sorts well watered, using manure-water occasionally to the well-established plants.

Primulas.—Shift such as require it, and keep them cool. A rich, light soil is most preferable to their growth. Sow a little seed to keep up a good supply of plants: start the old plants, if the supply be short; they may be made to flower rather earlier than seedlings.

Rhododendrons.—These will now be maturing their wood and flower buds. This should be assisted by a regular, but not an excessive supply of moisture, especially in dry weather. In case of continued wet, they should be screened from it, but by no means moved to a warmer situation, as that would inevitably set them growing again, and the flower-buds would be lost.

FRUIT GARDEN.

FIRST WEEK IN AUGUST.

Wall Trees.—Wall trees still demand great attention, particularly peaches, nectarines, and such like. Let them once more be carefully looked over, and see whether all the branches and shoots remain secure in their proper places; when any have been displaced by winds or other accidents, let them be nailed up again in a secure and neat manner, and where any of the shoots are loose, or project from the wall, or have extended in length, let the whole be nailed up securely.

Vines.—The fruit should now be thinned, where they have set thickly; by this means they will attain a much larger size. The laterals of vines should be kept into one joint, in order to admit sun and air into the fruit and young wood.

Strawberries.—Lay them in pots if required, and at an early period cut off the runners, and plant them, if wanted, in nursery beds for new plantations; those potted early for forcing should be set in a hot dry place to ripen them.

Plums.—Perhaps no fruit is more unequal in ripening than the plum, for whilst some will be quite ripe, others, on the same tree, will scarcely have begun to change their colour. The former should be taken off for culinary purposes, and it will tend greatly to promote the ripening of the fruit that is left on the tree.

Gathering Stone-fruit.—It is a common thing to let these fruits drop of their own accord when ripe, and in order that they may sustain little injury in falling, the borders at the foot of the wall are covered with moss, or nets are suspended so as to catch them; it is, however, a better practice to pull them than to let them drop, not only to save them from all blemish, but that they may be eaten in higher perfection. Let any one pull and eat an apricot or a peach from a shoot, on which there is another equally ripe, one or two days before it would have dropped; allow the other to drop off, eat it, and then draw the comparison. In fact, all kinds of stone fruit fall off in flavour, if suffered to fall from the tree. An important question, however, here arises, and that is the exact time *when* to pull, it being highly improper to handle or feel the fruit, especially the finer apricots and peaches. This, no doubt, requires some practice, and a knowledge of the kinds, to be able to judge at sight; but there is a simple method, which we advise even the best judges to follow. Have a funnel or trumpet-mouthed instrument made of tin, about six inches diameter at the mouth, and three or four inches deep; the edge thin, rounded off, and the whole lined with velvet. The handle must be also made of tin, two feet or a yard in length, and made to fit into a light staff about two yards long. With this the fruit of an ordinary-sized wall tree may be gathered; and the method is to slip the edge of the funnel gently underneath the fruit that is thought to be ripe, and give it a small shake. If it fall not in, pass it till the next day, or the next time you come gathering, which, in fine weather, should be twice a day. By this simple method, the fruit is preserved fair and unblemished, and may be gathered in the highest possible perfection with little trouble.

Currants and Gooseberries.—Currants and gooseberries on north walls or on palings, that are intended to be kept to the latest, should be netted over to preserve them from birds. These are sometimes kept back in the open ground by being matted up, which should be done as soon as they are fully ripe. Currants keep good a long time in this way, but gooseberries or raspberries hang so short a time, that it is hardly worth the trouble.

Apricots, Nectarines, Peaches and Plums will now be fast approaching to maturity. In order that the fruit may be exposed to the full sun, let the shoots in training be carefully dressed to the wall or rail. This is a matter too little attended to, but it is of much importance in the production of high-flavoured fruit. It is good practice not only to dress the shoots in training close to the wall, but to prune off all superfluous growth; and as the fruit begins to colour *to pick off every leaf that may overhang it*, thereby greatly enhancing its beauty and flavour. But it is necessary on another account to dress all shoots of those trees close to the wall at this time, and to continue doing so whilst they continue growing, even to the latest, and after all the fruit is gathered, namely, in order that these shoots which are to produce the next year's crop may be perfectly ripened and matured. If otherwise, the fruit will be weak, few, and the fruit in consequence will be scanty.

Cherries.—Take care that the nets provided for protecting the fruit from birds have no holes in them. It is too much the practice, especially with standard trees, to make one clearing of the fruit; when it frequently happens that much is gathered which is not ripe. It is far better to go over trees at particular intervals, and pick only the fruit that is ripe. When the whole of the fruit is gathered, the tree should be well washed to kill the lurking vermin, which might be destroying the fruit buds of the following year.

Figs.—Remove any unnecessary shoots that may now appear, and use all possible means to ripen the fruit; do not take off many of the leaves, but the wood should be much thinned.

Raspberries.—The young cones, if strong and likely to suffer from wind, should be tied up. The fruit for preserving must be gathered on a dry day.

SECOND WEEK IN AUGUST.

The Gathering of Fruits.—In the fruit garden there is a busy time approaching. The gathering of fruit at proper seasons is a very important affair, for a few days too late will make all the difference between rotting and keeping. In the case of apples, cut one open, and if the pips be turning colour, that time, or any day within a week, will do; if they be still white, let them hang longer. Choose a dry day for gathering, and for fruit that is to keep, let them not fall a single inch, for, however slight a bruise may be, it is sure to bring decay at that part sooner or later. The hundreds of modes of keeping fruit recommended by different authors, leave us no better satisfied than we were with the old plan of laying them on shelves singly on straw, in a dark apartment, and occasionally examining them, and throwing out the damaged ones. Where a fruit, however, has to be kept months before it be ripe, packing in boxes or packets may be resorted to for a portion of the time, but generally we have found, that after resorting to fifty different modes, of various degrees of troublesomeness, people have returned to the old and generally efficacious plan of laying them on racks or shelves, singly, in straw, and paying attention to them, whenever they were damp from sweating or otherwise. Gathering peaches, nectarines, plums, and stone or pulpy fruit is quite another affair. These can hardly get too ripe on the tree, and it is well to contrive to fasten a net against the wall, sloping outwards, but forming a bag, so that what falls should not be damaged for the table. Where any fruit on a tree varies as to the time of ripening it should be frequently examined, and the forwardest taken off. By this plan, you may be gathering for a considerable time, and have all in perfection.

VINES.—The vines on the walls should be looked over. The stumps of all useless lateral shoots, previously pinched off, should now be cut close to the bud, as they will not shoot again. This will give the wood and fruit air and light, which will materially aid their ripening. All the branches should be nailed in closely to the wall. The earlier grapes, in favourable situations, beginning to ripen, should have the benefit of the sun as much as possible, and, if the wasps or birds attack them, they should be protected by being put into thin crape, hair gauze, or paper bags, putting one bunch only in each, and having the bags made of different sizes for this purpose. Such grapes as are not so forward should be thinned out. It is of much importance that this should be done in time, as it will greatly tend to increase their size, and prevent them from rotting.

STRAWBERRIES.—Young plantations of strawberries may now be made with good prospect of success. The runners of all sorts intended to be propagated should be taken off, and bedded out in nursery-beds, in order to acquire strength to be planted out afterwards rather later in the season, or early in the spring. Although this is a very good season for making plantations of these fruits, still circumstances may occur to prevent such being done, such as want of space until other crops be removed, the dry state of the weather, &c.; for it will be easier to water the plants in the nursery-beds than in the finished plantation. Besides, all plants of this description are improved by frequent transplantation, which, of itself, would be sufficient reason for rearing them, previously to their final planting out in a nursery bed.

SMALL FRUITS.—Red and white currants, and Morella cherries, planted on north aspects, should, as they ripen, be covered up with nets to protect them from birds, and many of the large currant bushes may be covered with large garden mats, which will preserve them till a late period. The late and thick-skinned gooseberries, red and white currants, in quarters or rows, round the sides of the walks, should be examined, and such as are best laden with fruit should be covered up with mats or nets.

INSECTS UPON FRUIT-TREES.—Never lose sight of this object, even when the crop is gathered; therefore, when trees get stripped of their fruit, resume the use of the garden engine with great force upon them, particularly apricots, peaches, and plums. The red spider will often begin to show itself again, as, whilst the fruit has been ripening, it will have gained considerable strength. The destruction at this time of thousands of this formidable enemy will prevent millions coming forth in the spring. Slugs and wasps will now be strong, and every means should be adopted to destroy them; the directions given already, if acted upon with perseverance, will subdue them.

APRICOTS.—A few may ripen at the end of the month, and only those must be gathered; avoid touching those which are not ripe.

PEARS.—Again remove the breast-wood, or any after growth in blossoms, so as to conduct all the strength to the fruit and next year's wood. Let none of the leading shoots, especially of young trees, be injured from inattention to nailing, or otherwise securing them; a windy night might ruin them.

RIPENING MELONS.—Take particular care now of the ripening melons. If there should happen to be much rain, the roots of the plants and all the best fruit must be well defended from it. In hot, dry weather, give the advancing succession crops of melons occasional waterings.

THIRD WEEK IN AUGUST.

TRAINING IN SUMMER SHOOTS.—Continue to train in all shoots closely to the wall or espalier, whether the crop of fruit be gathered or not from the tree. Also pick off such leaves as overhang the fruit, not only of peaches and nectarines, but of the choice wall-pears and apples. Even this thinning of leaves should be extended to the espaliers, and done to a certain degree; at the same time thin away all superfluous spray from the spurs, and cutting clean off the lateral twigs.

STRAWBERRIES.—Now is a good time to plant strawberries, and if moist weather, it may be done any time in the month, but if the weather be very dry and hot, it will be proper either to water them plentifully, or do not begin planting till the latter end of the month. The strong runner plants of the same year, taken from buds that bear well, are the proper sets for planting. The principal sorts for general planting are, the scarlet, the hautboys, the large chili, the white and red wood, the pine-apple strawberry, and the alpine, for the plants of the latter continue to produce fruit from June to October and November, and if sheltered with a frame and glass, will sometimes, if open mild weather, continue till near Christmas. There are many new and excellent varieties of strawberries lately introduced, and all of which are worth cultivation, such as Myatt's pine, Keen's seedling, Willmott's superb, and Knyvett's new pine.

Currants.—About the middle of the month, it may be necessary to mat up a few of the best bushes, both for kitchen and dessert use; choose a perfectly dry day, and make the mats quite close; standards, espaliers, or wall-trained trees are most readily preserved in this way.

Gooseberries.—The choice sorts of gooseberries should now be matted up, but when this is done, their bushes should be quite dry. Where birds abound, it may be necessary to mat up the whole.

Wall Trees.—Again examine all the best stone-fruit trees; secure the retained shoots to the wall; place nets under the trees to keep the ripening fruit from falling to the ground. Remove any young growths lately produced; fix up loose branches or the points of lengthening shoots.

Fig Trees.—All strong shoots should be laid close to the wall, but use the knife as little as possible. No shoots should be cut off but those which grow fore-right, and those which grow in a proper position should be carefully trained, for those which are now laid on are the shoots from which the fruit is expected next year. Let the shoots be laid in regularly, not one across another, and secured properly, for on account of the broadness of the leaves, the wind and rain have great power over them.

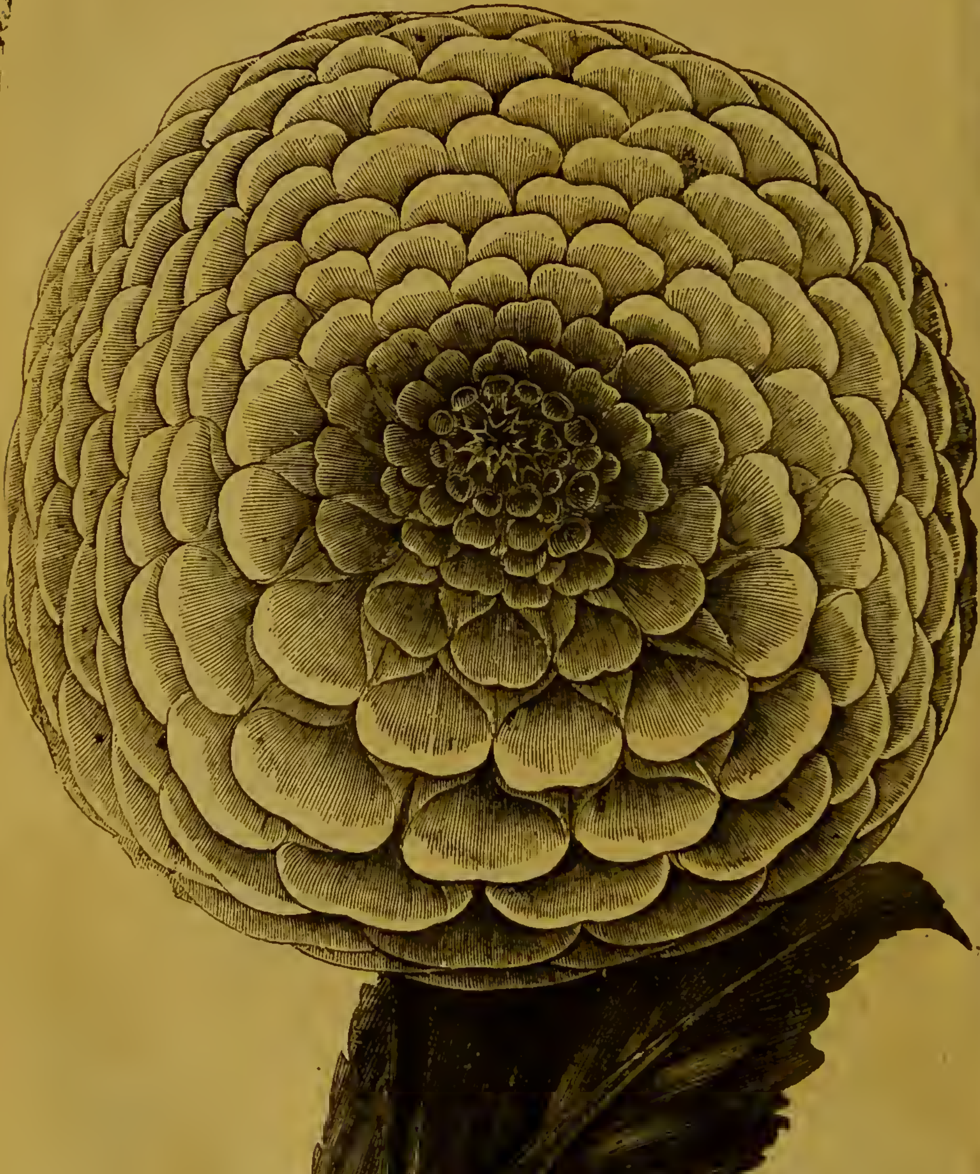
FOURTH WEEK IN AUGUST.

Vines.—Examine your vines once more, both those against walls, and such as are on the open ground; there will yet be some useless and trailing branches produced, and these must be removed. After this let all such as are loose from the walls or stakes be fastened, and when the whole is reduced thus far to order, look attentively over the condition of the fruit. In order to give every part of the tree its due degree of heat and sun, remove the leaves where there are too many, and bring in others from more distant places where they are wanting. When the vines are thus put in order, let the ground be dug up about and between them; it will have been trampled in going amongst them for the purpose of trimming, and weeds will have begun to spring up. This is the season at which the fruit requires most nourishment, and it would be ill management to leave the trees exhausted by weeds, or in ground hardened by treading. They want all the nourishment the earth can afford, and it is certain that a great deal less will be supplied by the same quantity, when the surface is hard, than when it is kept soft and broken by culture.

Raspberries.—The raspberry beds now require a particular management little understood by gardeners. The fruit is now matured or gradually approaching to maturity, and the business is to ripen it well. A free passage of air is the true and only way of ripening it, and at the season of ripening a great deal of nourishment is required, though watering is prejudicial: upon these two points, turns the management of the raspberry plantation at this time. Let the canes be placed in order at a proper distance from one another, and kept from dangling; a few stakes will be very useful for this purpose The canes must be kept free and clear from one another, and in a good position; and when they are thus brought to order, let the ground be dug up between the rows, and the mould broken very fine on the surface. They will after this grow with great vigour, and the fruit will be of the true delicate flavour.

Planting Currants and Gooseberries.—The lesser fruit trees are at no times so well transplanted as at this season, particularly if there come a little rain. The currant and the gooseberry will take at once, if they be watered, though there fall little or no wet from the clouds; but the raspberry will not do well unless it have natural showers. There is more care required for this little shrub than is commonly allowed to it, and that is the reason so many of the plantations succeed so badly. The planting raspberries in September, though generally practised, is too late. Warmth assists greatly in their rooting; and upon the first success depends their future strength. Whenever the end of August is showery, there is no time so favourable.

Gathering Fruit. — Gather standard pears and apples as they ripen. Many of them will not be fit for a month yet to come; but those which are ripe should be gathered. The fruit trees at this season should be carefully examined two or three



THE DAHLIA.—*For particulars, see p.* 287.

THE MULBERRY.—*See p.* 248.

times a week. The whole of the fruits does not ripen simultaneously; but it is the general custom, although a very faulty one, of stripping all the fruit off at one time, by which the ripe is gathered with the unripe, and a considerable loss is thereby sustained; if pulled too soon, the fruit never acquires its true flavour; if too late, it does not keep well.

KITCHEN GARDEN.

FIRST WEEK IN AUGUST.

General Directions.—Hoe, weed, thin and stir the surface amongst all crops; water, shade, and attend to neatness and order; clear off all crops as soon as they are exhausted, in order that the garden may always present a neat and orderly appearance; clear, dig, and trench every empty space, and let some useful vegetable be planted on it, differing in its nature and habit from that which grew on it before. By this mode of management none of the ground will be idle. Fallowing ground is a waste of time and labour. As slugs and other vermin will now be making deplorable ravages amongst crops of young plants, a constant attention is required to subdue them. Those seeds which are ripening should be gathered when dry, and after being properly hardened, laid by for use in a dry, airy seed room. Collect all the fragrant, culinary, and medicinal herbs.

Asparagus.—The asparagus beds must be regularly cleared of all weeds. Particular attention must be paid to the beds planted in the spring, as well as to seedling plants. As we are most anxious to lay before our readers any information by which the culture of our culinary vegetables can be improved, we shall take this opportunity of presenting them with the mode of cultivating asparagus in Vienna, which is suppposed to be the finest in the world. It is grown in earthenware hollow cylinders, open at one end, and at the other merely pierced with a hole to admit light. The situation of the beds should be a sunny one, and dry. They should be planted with two rows of asparagus, if three and a half feet broad; and in three rows, if five feet broad; between each bed there should be a space of three feet, in order that the beds may not be trodden upon by the gardener, when cutting, or cleaning, or manuring. The beds should be about three to three and a half feet deep, and the earth well screened through a sieve. They should be thus filled, early in April:—1st, one foot deep of leaves and earth, taken from under the trees, or else with wood shavings, rotten wood, or other substance which will allow the water to drain through; and this is to be laid down lightly, not pressed, nor trodden down; 2nd, six inches of clean earth, passed through a sieve; 3rd, six inches of manure; 4th, six inches of good earth; 5th, six inches of manure; 6th, six inches of fine good earth. The asparagus must then be planted at distances of two feet upon hotbeds of three inches high, and twelve inches in circumference, formed in the shape of an inverted plate upon the ground, so that the roots may spread all round. These roots are then to be covered with a little more hotbed earth, and the whole bed to be covered with rich earth to a good inch above the tops of the roots, or a foot above the level of the garden. This is necessary, as the beds always sink very much for the first year or two. After being planted, the beds should be gently watered, and as soon as the shoots attain the height of six inches, they should have a cylinder of clay, with a hole at the top of each, big enough to admit of a straw, and the air should be allowed to pass through from underneath. Asparagus should be planted in April, according to the weather, and will, when thus planted, produce for twenty years, consecutively, and increase in quality every year as the roots spread.

Borecole.—It is not yet too late to sow a little seed, for a very late crop. Plant out any that are remaining in the beds, giving them in dry weather a copious watering. Keep the growing crops clear from weeds.

Brocoli.—Plant out some of the late crops, which will come in the following May. The soil in which they are planted should be a rich loam, well manured.

Cabbage should now be sown for a main crop. The varieties are numerous, but none surpass the early Yorks. A large cabbage is now sold under the name of the "Enfield Market." It hearts well, is sweet and tender, without any of the rankness so commonly experienced in cabbages. It is an excellent cabbage for standing the winter. The vanak is a fine cabbage. The time for sowing the latter cabbage is variously recommended; but everything must depend on the season. If it be dry, the seeds cannot vegetate; therefore, let the seed-bed or border be first soaked with water for three nights, and cover the spot with mats during the day. As soon as the plants are fairly up, sprinkle completely over-night, and again shade a little for a day or two, by a mat or canvas raised an inch or two above the seedlings.

Carrot.—If it be desired to have them young and early in spring, some seed should be sown the early part of the month in a deep, open, and rich soil. Do not sow this seed on a windy day, as the seeds are of that winged kind that the wind is apt to blow them in every direction but the right one. If they be sown in drills, they should be a foot asunder.

Cauliflower. — Cauliflowers, for the early crops of next year, should be sown this month at the beginning, the middle, and again at the end of it. Gardening is not without its superstitions, and the London market gardeners fix upon the twenty-first of this month for the sowing of the seed; but it is ridiculous to suppose that any one particular day is better than another, or that the fifteenth or sixteenth would not be as favourable as the twenty-first. The better plan is to adopt the medium; for if they be grown too soon, they are apt to button, and if too late, they will not be sufficiently strong to weather the winter. In order, however, to guard against the difference in seasons, the better plan would be to make three different sowings; one in the first week in August, one on the fifteenth, and one on the thirty-first; for the day which would be the proper day in one year would not be the proper day in another. Cauliflowers sown at this time will produce their heads in May. It is stated, in the *Domestic Gardener's Manual*, that if cauliflower be not sown till the last week in August, and if the seedlings be not transplanted till the middle or near the end of November, before the hard weather sets in, no sort of covering is necessary, nor any other protection than that afforded by a wall having a south aspect. It may be true that the cauliflower plants are often killed with too much kindness; but we can only say that if any of our young gardeners wish to lose the cauliflower plants, they will follow the advice of the editor of the *Gardener's Manual*.

Celery.—We have already given full instructions for the management of celery, and the duty of the gardener is now principally confined to earthing up the crops, taking particular care to keep the earth from the hearts, and not to repeat the earthing too frequently. It may be found beneficial to give the growing crops a little liquid manure, but by no means to saturate the soil.

Coleworts.—Select the strongest from the early cabbage beds, and plant them at a distance of fourteen inches each way. Hoe up those that have been already planted, and pick out all those that show an inclination to run to seed.

Endive.—The seed must now be sown the first week for a late winter crop. Plant out those from the seed-bed that were sown in June or July. Keep the hoe at work between those that were planted early, and protect those that are likely to blanch from heavy rains.

Kidney Beans.—Earth up the dwarf sorts of kidney beans, and put the stakes to those that require it. Select some of the best pods for seed, but do not leave too many on a plant, as they may exhaust its strength, and diminish the goodness of the seed.

Fennel and Angelica.—About the beginning of this month the seeds of fennel may be sown, which are intended to raise plants for next year's use, and by sowing them at this season, they will come up strongest in the spring, though they will also grow very well by spring sowing in February or March.

Leeks.—Keep them free from weeds, and draw some earth about the stems—many people adopt the erroneous practice of cutting the leaves, but it is a practice that ought to be studiously avoided, as it commits a great injury to the plant.

Lettuce.—Sow hardy Dutch, cos, and Bath lettuce, for transplanting. The principal sowing should be made the first week in this month, and which is intended to raise plants for supplying the table in September, October and November. The second sowing must be done some time between the fifteenth and twenty-first of the month, and the plants raised from the sowing are some to be planted in September and October, for winter supply, and of others, such as Silesia, brown Dutch, common white, and hardy green cabbage lettuce, some may be transplanted into beds or borders, and a principal supply remain, and thinned moderately to cut for use as wanted, in winter or spring; and a good quantity of the cos, and other lettuces to be planted out in September and October upon warm borders, in order to supply the table next March, April, and May. Or some of the plants raised from both the first and second sowing, particularly the brown Dutch, and common cabbage lettuces, may, in October and November, be planted in shallow frames, to forward them for winter service, in which season they must be covered every night, and in all wet and other bad and cold weather with the glasses, and in hard frosts they must also have a covering of dry litter, such as straw or fern, laid over the glasses, and about the outside of the frames. If thus managed, some will be tolerably well cabbaged, in small heads, in December, January, and February.

Onions, if ripe, should be taken up, and laid with their roots facing the sun, under some dry airy shed. The ground is then to be trenched up and laid in ridges. The seed for a full winter crop may be sown the first week; the soil must be deep and rich, and should be sown in drills a foot apart. The Strasburg and Welch onions should be sown, to supply the table during winter and early spring for salads.

Parsnips.—Examine the crops, and thin them where necessary. Keep them clear from weeds.

Radish. — For the winter, or the late autumn crops, some seed may now be sown. The black Spanish, or the queen radish, is the best kind to sow.

Salads, such as mustard, cress, &c., should be sown every fortnight; if sown in a shady place, it will keep in use the longer.

Spinach should be sown at the beginning of this month, to produce a supply during autumn, winter, and the spring months, until the spring crops come in to succeed it. The prickly-seeded, or the Flanders sort, is to be preferred for this sowing, as being less tender than the round-seeded kind, and better calculated to stand the severity of the winter. Ground intended for spinach cannot be too highly manured, as the larger and more succulent the herb is, the more it is esteemed. Spinach, however, when too strong will not stand the winter so well as that which is less succulent; still, if the weather be mild, such strong crops will afford an abundant winter supply.

Turnips.—Another sowing may still be made. The white stone, or a superior early sort, is to be preferred. Thin out and hoe the earlier crops.

SECOND WEEK IN AUGUST.

General Directions.—Remove all decayed leaves, branches, and stems, and the remains of all crops that have been used, so as to preserve order and neatness, and make way for winter crops, or winter fallows. The winter cropping must now be nearly closed; gather in and dry herbs and seeds of all kinds, also onions, shalots, and such like. Hoe and earth up the growing crops, and apply clear liquid manure often; clear, dig, or trench every empty space, and let it be occupied by some useful vegetable, different in constitution from that which grew there before.

Artichokes. — As the young leaves of artichokes intended for chard, and which were put in a state of preparation for that purpose last month, advance to the height of a foot, or eighteen inches, they should be tied together with sprigs of matting, and then enveloped in clean straw, and gradually moulded up, as practised with cardoons, or the leaves may be held by the hand and bound round with haybands, and the mould drawn round them.

Angelica. — Angelica being a biennial plant should be sown as soon as its seeds ripen in autumn. A rather damp situation is most congenial to them. In April they will be fit to plant where they are to come to perfection.

Cabbage Plants.—Cabbage plants may be planted out now in any spare quarters, as close as five or six inches from each other in the rows, and the rows wide enough apart to walk between them. In the winter every other one may be drawn to boil as greens, and give the rest more room to grow; farther into the winter every other one may be taken again, which will give full room to cabbage, and they will come in early and fine.

Cauliflowers.—The later sown ones to be kept over the winter should now be protected from heavy rains, and the best way to accomplish this is to get a garden-frame, and select a spot of ground well-drained. This should be dressed and dug just the size required for the frame, as much as the frame will cover, and from the seed bed plant out, three inches apart, as many as will fill the space. This done, and the earth settled about their roots by a gentle watering, place the frame in it, proper situation, and put on the glass for four-and-twenty hours, shading if necessary from the heat of the sun. Some of the cauliflower plants that were set out in the month of July for a Michaelmas crop will, towards the latter part of this month or the beginning of next, begin to show their heads; they should be encouraged in their growth as much as possible by passing the hoe between the rows, and drawing up the earth round their stalks.

Cardoons.—The cardoons will now be advanced to some height by the middle of this month, and, therefore, they must accordingly be blanched higher. Tie their leaves closely and regularly together. Those earthed up now will be fit for use in October, November, and December, and the two succeeding months, but in severe frosts should be covered with dry litter; or in some fully blanched plants, you may at the approach of severe frost loosen the earth below on one side and lean them down towards the ground, as the covering can then be more readily applied.

Endive.—Plant out endive for a general winter crop, in a dry spot in a warm situation, allowing them a foot distance each way, and some should also be planted in a warm border, or dry sheltered compartments, to remain till after Christmas, before you begin to blanch it. This, if it survives the frost, will be acceptable for salads and other uses, in January, February, and March, and especially if covered with a coat of dry leaves or fern. Tie together the leaves of endive, to blanch white, tender, and mild tasted; observing generally to perform it in dry weather, and principally to the largest full-sized plants, of good stocky growth, and full in the heart.

LETTUCES.—The different sorts of lettuces sown in July, for autumn, winter, and spring use, should be planted out at different times this month, into the beds and borders where they are to remain. It must, however, be observed, that if no seeds were sown at that time for the borders, you must not in this case omit to sow some, which will be in good time, provided it be sown in warm, rich ground. About the middle of the month some seed of different sorts should be sown to plant in frames, &c., in October, to stand the winter, for use in the following spring, and early in the summer.

PARSLEY.—Parsley may be sown this month for winter and spring use, this being the most natural season for sowing biennials.

SALADS. — Radishes for autumn supply should be sown at least twice this month; all sorts are alike proper. The black spinach sort may be sown for variety, as also for winter use, as it may be taken up and preserved in sand till spring. American cress, chervil, cress, mustard, rape, &c., should also be sown during the month. Salads sown now will continue longer fit for use than such as were sown during the previous summer months. An abundant supply of Normandy curled cress should be sown at this time, which will continue in perfection during winter, and early in spring. Brown cos lettuce should now be sown; the plants of this sowing will stand the winter, and come into use in spring.

TURNIPS.—Hoe and thin the turnips which were sown last month; let the plants be thinned out to the distance of about six or eight inches; but for large field turnips, cut them out almost double that distance.

WINTER SPINACH. — The spinach which was sown in July should now be cleared, and thinned out to proper distances. Let the plants be thinned out regulary to the distance of three or four inches.

THIRD WEEK IN AUGUST.

BROCOLI.—Continue to plant for a winter and spring crop. Draw the earth to the stems of those that have been planted some time.

CELERY.—Earth up as it grows on dry days. Plant out another crop for use during the winter.

CRESS (BLACK AMERICAN).—Sow on a warm border, at the bottom of a wall or hedge, about the middle of the month, or on a bed of light dry earth, or any situation exposed to the sun. It will stand the winter, and come in early in the spring. It may be sown either broadcast or in drills, nine or ten inches apart.

CRESS (GARDEN) may also be sown about the middle of this month; it will continue good cutting till destroyed by frost; sow the curled kind, as it is the hardiest.

COLEWORTS may still be planted. If a succession be required, plant some the middle of this month.

ENDIVE for a late crop should be sown about the middle of this month; also plant out of that sown last month for a full crop. Hoe and clean the advancing crop, and if endive be required early, let the blanching be begun, either by earthing or tying up; it will be fit for use in a few weeks.

HERBS.—Continue to gather and dry all kinds of pot and medicinal herbs, according to the season and state of their growth. If slips or cuttings have not yet been made, they will succeed very well, especially if made before the middle of the month.

LETTUCES may still be sown in rich dry soil, and a warm situation, which will be fit to transplant in October. Sow the brown Dutch, and hardy green cabbage, and the green and black seeded cos kinds.

ONIONS.—At this time the spring-grown crops will be fast approaching to maturity, and with the view of forwarding them, and promoting the swelling of the bulbs, they should be laid according to the directions already given.

RADISHES. — About the middle of the month sow a few black Spanish, and also some red and white queen radish. They may either be sown in shallow drills, thinly, at nine inches apart, or may be sown broadcast, or the queen kind may be sown along with the winter spinach; but the black Spanish grows too rank in the leaves to be sown amongst other crops.

SHALLOTS. — About the middle of the month, the full crops of shallots, garlic, and rocambole, will be fit for taking up. The criterion of their ripeness is when the leaves turn yellow.

SALADS sown now will continue longer fit for use than such as were sown during the previous summer months. An abundant supply of Normandy curled cress should be sown at this time, which will continue in perfection during winter and early in spring.

TURNIP (THE YELLOW DUTCH), for a full winter crop, may be sown about the middle of the month. About the latter end of the month they may be partially thinned out, and finally in September.

FOURTH WEEK IN AUGUST.

ARTICHOKES now require dressing. A number of suckers will naturally be produced from the sides of all the plants that are healthy, which, if not taken off, will impoverish and drain the nourishment from the more perfect fruit at the top.

BROCOLI.—The brocoli plants which were removed the beginning of last month from the seed bed, should now have their last removal, watering them daily till they have taken root.

CABBAGE.—Cabbage seed may still be sown the latter end of the month from which to raise plants for standing the winter, and to come in the earliest next spring. Sow the early dwarf, or true early York, on a bed or border of light dry earth, moderately rich. A little red cabbage may be sown at the same time, to plant out in the spring.

CARROT.—A small quantity of carrot seed may be sown. As the plants come up, they must be carefully weeded, and they must be thinned to their proper distances. If they survive the winter they will come early to perfection, but their success in a great measure depends upon their standing distinct and clear from each other.

CELERY.—Continue to earth up the plants that were planted out in June, in dry weather. Pull up any plants that may have run to seed. This earthing must be repeated every second or third week, according to the growth of the plants; but never earth up too much at a time.

COLEWORTS.—Thin the seed-beds. The plants that are taken up should not be thrown away, but removed into another bed; and after this the seed-bed must be weeded. This must be repeated from time to time. The transplanted seedlings must be carefully watered, and the bed often refreshed in the same manner. It will be a great advantage to bring them forward now, and this will be the most effectually done by frequently watering.

CORN-SALAD.—Sow the seed for the succeeding spring; it lies a long time in the ground, and takes the first growth slowly. If the seed be kept till spring, it is a great chance if it succeeds; but if sown fresh at this time of the year, however long it may lie in the ground, there will be no fear of its ultimately coming up.

FENNEL.—This is a useful herb, and there is no time of the year when it succeeds better than at this season for sowing.

LETTUCES.—Dig some warm pieces of ground under walls and pales for lettuce seed. Let it be sown with a sparing hand, and when the young plants rise, let them be well watered and weeded. The cabbage and brown Dutch lettuce will succeed very well in this manner.

HERBS are now to be planted out, and the best time is when the weather is showery. If the sky withhold its supply, the labour of the hand must take its place, for this season must not be passed over. Sage and thyme, rosemary and lavender, mint, balm, and winter savory, are all now to be planted. This early time will let them root well before winter, and they will be secure from decay.

MANAGEMENT OF AROMATIC PLANTS.—Towards the latter end of this month, it will be proper to cut down the decayed stems of many kinds of aromatic plants, such as hissop, savory, sage, lavender, and all other such like kinds; at the same time it will be proper to shorten all the straggling young shoots, in order to keep the plants within due compass, which will also make them produce numbers of new short shoots, and they will by that means form close snug heads before winter.

ONIONS (SPRING).—Dig a well-sheltered piece of ground for the spring onions. Let the mould be very fine, and the seed sown on pretty thick.

RED CABBAGE.—Few people know the worth of this vegetable, except for its use as a pickle, whereas it may be used raw as salad, and is excellent. The seed should be sown during the present month so as to get strong enough to stand the winter in the store-beds, when they are to be pricked out six inches apart. They may be planted out in February or March, to their final destination, two feet apart one way, and eighteen inches the other.

SHALLOTS AND GARLIC must be taken up as soon as their leaves turn yellow, which is a sign that they have attained their growth; they should then be pulled, and put in a dry place to keep for use.

SEEDS.—Gather such seeds as are ripe, and spread them upon mats to dry, turning them from time to time; and when they are dry in the pods, rub them out, spreading them once again to harden.

ON THE ADVANTAGE OF GARDENERS UNDERSTANDING THE GEOGRAPHICAL DISTRIBUTION OF PLANTS.

BY MR. KEANE.

In the study of any trade or profession which an individual may be inclined to pursue, the great advantage is to know the particular subjects most necessary to be acquired; and as we, in our humble opinion, consider the geographical distribution of plants very necessary to be studied by gardeners, we will, without further preliminaries, enter into the investigation and elucidation of the subject.

As we advance from the pole to the equator we observe the temperature gradually increasing, and as we ascend from the surface of the sea into the atmosphere we find the temperature gradually decreasing, until we reach a boundary where our further inquiries are stopped by the deep snow, and where vegetation ceases. In taking into calculation the vegetation of a given climate, it is necessary to investigate the temperature peculiar to the latitude itself, and the reduction caused by elevation.

The effect of elevation is not the same in Europe with all plants; there are many that are found to grow indifferently upon the valley and the mountains, as high as perpetual snow; but, on the other hand, there are many whose boundaries are circumscribed, either by elevation or equivalent temperature. Many plants indigenous on the plains in the North of Europe occupy the mountains of the South. The causes of the influence of elevation upon plants are ascribed to reduced temperature, to a greater intensity of solar light, and to a decrease in humidity.

The rarefaction of the air as we ascend produces a corresponding increase in the intensity of light. In taking a view of the influences caused by latitude, we find, that in the countries situate near the equator the vegetation consists of palms and thick jungles or forests of evergreen trees; as we retire from the equator, trees with deciduous leaves, pinus, &c., gradually appear, rich pastures open to the prospect, mosses surround the trunks of old trees, and decayed and decaying vegetables are covered with fungi. As we approach the poles, trees wholly disappear, and lichens constitute the chief features of vegetation.

Although a number of places may have the same annual temperature, yet they have not the same climate. There are the secondary constituents of climate:—such are the situation of the place, its distance from the sea, its proximity to mountains, its elevation above the elevation of the ocean, the nature of the soil, the cultivation of the lands in its vicinity, and the direction of the winds to which it is exposed: these, and many other local phenomena, may so affect the results which would otherwise be produced by solar heat, as to prevent any hope of ascertaining a climate without experiment. Instances are frequent of the same plants growing as indigenous in Europe, Asia, Africa, and America; but the most rational and feasible way to account for it is to suppose that the plants must have been originally created where they now vegetate, the contingent circumstances under which they were found having been favourable to the particular mode of vegetable development which was necessary for their formation. We also find, in general, that the habits and customs of men are influenced by tho nature of the soil and the climate which they inhabit. The unpolished and hardy mountaineer derives his character from that of his native hills; the warm and luxurious plains of the south, impart indolence and inactivity; the cold and barren scenes of tho north produce a brisk and persevering activity.

We will now enter into the subject of the effect light has upon plants, although some species of plants seem to derive their very existence from the direct and vivid rays of the sun, whilst there are many others unable to endure its more immediate influences. Orchideous plants, when exposed to tho powerful blaze of a meridian sun, lose all that rich luxuriance for which they are remarkable, their leaves become brown, and their growth is very much checked, if not entirely suspended. On the other hand, the ill effects of an insufficient quantity of light for those plants that require it more abundantly, are made manifest by their stems becoming elongated, etiolated, and, consequently, weak and slender, and by tho leaves assuming a pale and sickly appearance, and if it be withheld for any great length of time they will certainly perish.

As a general criterion to judge of the nature of such plants that require the full power of the sun's rays, we find that those of a juicy or succulent substance, which produce a great number of leaves, and expose a large surface to the atmosphere, require a great intensity of light, and are always found in those situations where a great supply is given to them. Those plants which are very porus, and are abundantly furnished with organs of evaporation, and those which are nearly destitute of foliage, are generally found in shady places, and abound most in the recesses of tropical forests, where the direct rays of the sun never penetrate. The *cacti*, *opuntia*, *mysembrianthemum*, and all plants of that succulent nature, require a great intensity of light. Orange trees, instead of being kept in dark houses, and exposed, as they generally are in autumn, to the direct rays of the sun, (which must be injurious to them by such sudden transitions of light), on the general principles recommended, ought to be more exposed to the rays of solar heat. Geraniums may be classed with the other plants which receive great benefit from a full exposure to the influence of light; whilst, on the other hand, Camellias would be found to succeed best in a comparatively shady situation, where they flower well, and attain that luxuriance of foliage which is one of their chief ornaments. Hothouse climbers are found in their native countries climbing on the branches of trees in large jungles, where the rays of the sun never penetrate, and instead of being exposed, as they generally are in our stoves, they would be found to succeed better in more shaded situations.

In the successful cultivation of plants of fruits, it is necessary to erect a house for them which would be properly adapted to the habits of the plants or fruits, and that they should receive the rays of light vertically and not obliquely, and to form such a slope of roofs as shall be at right angles to the sun's rays, at whatever season it is intended to ripen the fruit. The angle of 45° is generally used by gardeners, and in the latitude of London, the rays would be perpendicular in the early part of April and in September. To have the greatest benefit of the sun's rays in ripening fruits in July, an angle of 34° is the best for that purpose.

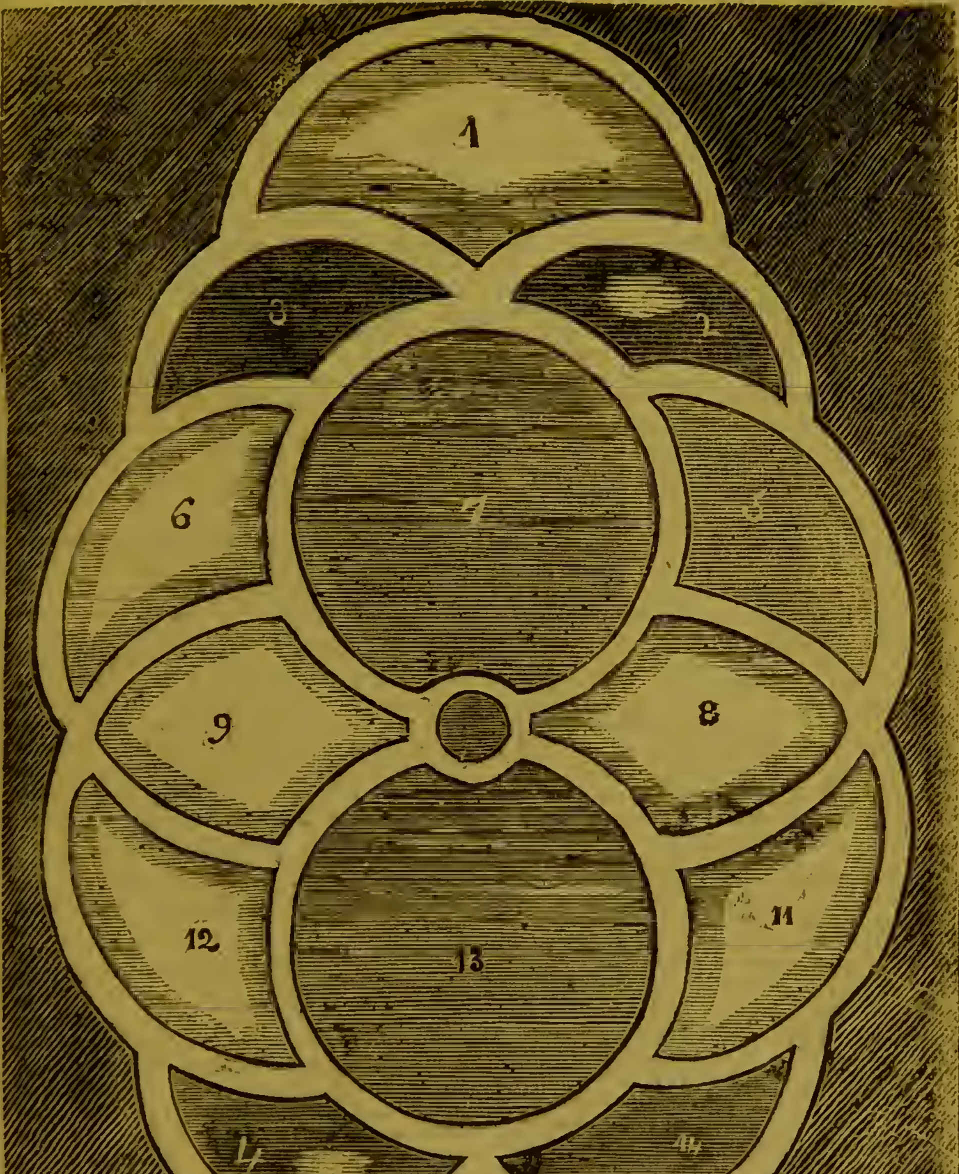
The history of animate and inanimate nature is always interesting to a gardener, as it introduces him to an intimate acquaintance with subjects closely connected with his profession. Now that steam, the annihilator of time and space, is certain before long to form into one brotherhood the dispersed nations of the earth, we may expect that civilization will advance with rapid strides, that national prejudices will gradually vanish, and that the philanthropic feeling of good wishes for the intellectual and moral improvement of mankind will be more generally diffused amongst the nations of the earth. It is closeness and frequency of intercourse that most strongly cements, and most surely maintains friendship and goodwill between nations and between individuals.

THE MULBERRY.

The mulberry is generally reckoned as a biblical tree, but it is very doubtful if it has really a right to be so included. Loudon, without inquiring whether our translators were right in rendering the original term *Baca*, at once concludes that the tree is twice mentioned in the sacred writings. Hasselquist states that the mulberry scarcely ever grows in Judæa, very little in Galilee, though abounding in Syria, and in the mountains of Lebanon. In the Chronicles, the term *Becaim* is rendered pear trees; and Aguila and the Vulgate have it the same way. Parkhurst gives it as his opinion, that *Baca* means a kind of large shrub, from which is distilled an odoriferous gum, and in this opinion he is strengthened by the fact that the Arabs have a shrub corresponding with this description, which they likewise call *Baca*. Its other associations rest on a clearer foundation. Pyramus, who lived in Babylon, became enamoured of Thisbe, a very beautiful virgin of that city. The flame was mutual, but their parents forbade their marriage, so that the lovers interchanged sentiments through an aperture in a wall, which separated their houses. They agreed to meet at the tomb of Ninus, which was overshadowed by a white mulberry tree, and without the walls of Babylon. Thisbe was first there, but the unlooked-for arrival of a lioness frightened her away, and as she fled she dropped her veil, which the lioness found, and left covered with blood. The lover soon after arrived, and having found Thisbe's veil bloody, concluded that she had been torn to pieces by wild beasts. He instantly stabbed himself. When she had so far recovered, Thisbe returned; and when she saw the dying Pyramus, she fell upon the sword with which he had destroyed himself. The mulberry tree was stained with the blood of the lovers, and ever afterwards bore fruit of that colour.

The most common species of the mulberry are the *Morus nigra*, or black mulberry, and the *Morus alba*, or white mulberry, which is extensively cultivated in many countries for its leaves, which form the chief food of silkworms. The former species is in general cultivation for the sale of its fruit, which is well known.

Linnæus has enumerated seven species of



PLAN OF FLOWER GARDEN.—*See p.* 285

the mulberry known in his day, all which are employed to feed the silkworm, except the *Tinctoria* and *Indica*, of which the first-named furnishes the well-known dyeing substance called *fustic*.

The species of mulberry found growing wild in many parts of Italy and the southern provinces of Europe, is the *Morus alba* of botanists; the berries being of a round and oblong form, and red or dark purple, the bulb enveloping numerous small seeds. When perfectly ripe they are pleasant and wholesome. It is the opinion of the most eminent sericulturists of France, that the leaves of the wild mulberry tree are far preferable to the cultivated leaf in the feeding of silkworms, and their attention is now more directed to the culture of the wild tree than the grafted one.

The varieties of mulberry employed in Europe for feeding the silkworm, form a long list. They have usually been multiplied by engrafting the finer kinds on the stalks of the common white Italian mulberry. Hence the fine, large, and firm leaved kinds called the Rose of Provence, the Rose of Lombardy, &c. The exertions made to improve the tree, and increase the size of the leaf, by repeatedly sowing the seeds of the best kinds, have resulted in the greatest success; and now the Moretta, Elata, and other varieties, are obtained from seed, with leaves sufficiently large to render grafting unnecessary.

The principal breeders of silkworms, however, in France, say that it is very true that an increase of foliage has been obtained by these graftings, but that the virtue of the leaf is in a great measure destroyed in regard to the production of silk, and particularly the health of the insect, and they even go so far as to attribute to the cultivated leaf the introduction of many diseases, particularly that scourge of the silkworm—the muscardine, which was not known so long as the worms were fed on the uncultivated leaf, and so strongly are they impressed with that truth, that the culture of the wild tree has now become an object of particular attention to the sericulturists of France.

Independently of the long-known varieties of the mulberry employed in the feeding of silk worms, there are two others, namely, the Multicaulis and the Chinese, which have been greatly multiplied, especially the former. The Chinese is usually produced from seeds imported from Canton. Its growth is exceedingly vigorous, and its leaves heart-shaped, flat, and very large. The Multicaulis is always propagated from cuttings or layers, and is more hardy than the Chinese, with large leaves, which are always hollow and uneven. Of late years, a hybrid variety of mulberry has been produced in France, by shaking the pollen of the Moretta flower over the flowers of the Multicaulis. The seeds of the Multicaulis obtained by this mixture produce a hybrid variety, with more valuable qualities than the parent, and nearly as great a capacity for propagation by layers and cuttings. The hybrid Multicaulis has large flat leaves, like those of the Chinese or Canton seedlings. They are firm, and much relished by the worms. They endure frost equally well with the white mulberry, and are well adapted for the silk culture, both from their great precocity of growth, hardness, and valuable qualities for feeding the worm and making good silk.

The standard mulberries should invariably have a strong stake set up beside them, to keep them in an upright position, and this should be continued until the tree is at least twenty years of age. The prevailing characteristic of mulberry trees throughout England, when left entirely to nature, is that they are one sided and top heavy, requiring props to support them. This defect might be easily remedied by applying the aid alluded to. The trees should be planted in sheltered situations, in rich trenched soil, kept up by frequent manurings. When so treated, the fruit is large and juicy.

The principal use of the fruit of the black mulberry is for the dessert, but from its cooling and laxative qualities, its juice, diluted with water, is sometimes used as a beverage in fevers. It is also employed in the form of syrup for medicinal purposes, chiefly to colour other fluid medicines. The juice is also used to give a dark tinge to liquors and confections. When properly fermented and prepared, the fruit yields a pleasant vinous liquor, known under the name of mulberry wine. In the cider counties they are sometimes mixed with apples to form a beverage known as mulberry cider. The bark of the root has an acrid, bitter taste, and is a powerful cathartic—hence it has been successfully used as a vermifuge, in doses of a scruple in powder. The wood of the tree is yellow, tolerably hard, and may be applied to a variety of purposes in turning and carving. It is, however, necessary to steep it in water before it is worked, in order to remove the tough and fibrous bark, which is capable of being converted into strong cordage, ropes, and brown paper.

MAKING HOTBEDS.

It is a common piece of advice to say—"Make a hotbed," but it is not every one who knows how to make one; and it is this great deficiency of practical information that renders the majority of the horticultural works of the present day so utterly useless to the amateur or the uninitiated gardener. It is a very easy thing to say—Do this or do that, but the question arises—How am I to do this or to do that? Few men are possessed of intuitive knowledge upon any subject, and if a person has not an elementary work which he can consult, how can he become acquainted with any of the practical minutiæ of the art or science which he is studying? It is, however, the assumption of the possession of that intuitive knowledge which operates as such a disheartening drawback to the attainment of horticultural science; a man, to follow the rules and prescriptions of some eminent horticulturist, with F.H.S. attached to his name, must, in fact, be in a great measure an experienced gardener, and he must be particularly acquainted with the jargonical (if we may be allowed to coin a word) nomenclature of botany, without which the Linnæan system is utterly incomprehensible—and the incomprehensibility is not much removed when you do know it. It is rather singular to remark the opposite and conflicting opinions of our most eminent horticulturists on the groundwork of botany. Dr. Lindley says—"That the principles of the Linnæan system *are clear and simple*, and easily remembered, *is indisputable; that student, indeed, must be remarkably dull of apprehension* who could not master them in a day." Let us, however, turn to what Mrs. Loudon says:—

"There was something in the Linnæan system excessively repugnant to me. I never could remember the different classes and orders, and after several attempts, the study was given up, *as one too difficult for me to master.*" Now, accordingly, how dull of apprehension Mrs. Loudon must be in the opinion of Dr. Lindley, for she not only could not master the study in a single day, but she relinquished it altogether as a hopeless task. We will take as an example Dr. Lindley's botanical description of a passion flower, and then we will propound the simple question—Is it intelligible to the English reader, or is it possible that any one can master such a system in a day, or even in his lifetime?

"Five petals, arising from the throat to the caylx on the outside of the filamentous processes, occasionally wanting, sometimes irregular *imbricated in æstivation.* Stamens five, *monadelphous;* fruit, surrounded by the calyx, stalked, one celled with three *parietal, polyspermous placentæ;* seeds attached in several rows to the placentæ, with a brittle sculptured *testa*, surrounded by a pulpy *arillus; radicle* turned towards the *hilum; cotyledons*, flat; leaves alternate, with *foliaceous stipulæ*, often glandular; flowers axillary or terminal, often with three-leaved *involucre.*"

We acknowledge that the above specimen of botanical jargon is not exactly applicable to a proper comprehension of the genera and species, according to the Linnæan system, but they are themselves written in a language which only the classical scholar can understand; and how few are to be found amongst the professed gardeners of the present day!

Let us suppose, by way of illustration, that an individual be called upon to understand the following natural system of botany, as it is now propounded by its professors;—will it require a day, a month, a year, or twenty years, to master it? and can it be supposed, that a science can be generally cultivated, that is attended with such almost insurmountable difficulties, and which can only be surmounted by a most retentive memory, and a high classical education?

In the first place, we are told that all plants are either *vascular*, that is, containing tubes or vessels, amongst their component tissue, or *cellular*, that is, composed entirely of cells; then again plants are either *exogenous*, that is, the stems increasing by deposit from the exterior, or they are *endogenous*, that is, increasing by internal deposit. Cellular plants are *acrogenous*, that is, increasing by additions at the point of their axis. Again, taking another feature as the distinguishing mark, *exogenous* plants are the same as *dicotyledonous* ones; *endogenous* plants are the same as *monocotyledonous* ones; and *acrogenous* plants are identical with *acotyledonous* ones. Carrying this subdivision still further (and we are afraid that our readers will say that we have carried it quite far enough), *exogenous* or *dicotyledonous* plants are either *dichlamydeous* or *monochlamydeous*. Again, *dichlamydeous* have three divisions,—*thalamifloral calycifloral*, or *corollifloral.* Endogenous or monocotyledonous plants are either *phanerogonous*, or *crytogamous*. *Cellular acrogenous*, or acotyledonous plants are at once divided into three, four, or five orders, but the vascular plants are again separated into groups, having some remarkable characteristics in common, and these are again divided into distinct orders.

We have now given a plain and simple narration of the manner in which a natural order of botany is formed. Whether it will be understood or not, we will not pretend to determine, but we will venture to parody a passage of the inimitable Sterne :—Of all the cants that were ever canted in this canting world, save us from the cant of botany.

We will, however, return to this subject on a future occasion; we began the present paper with the resolution to impart to our horticultural friends a little instruction in the heart of making a hotbed, and we have with great remissness been leading them into the labyrinths and quagmires of botanical science, from which we doubt not that they will rejoice to be emancipated.

We cannot deny that the hot-water apparatus possesses many advantages in the cultivation and forcing of fruits and vegetables; but still it will be a long time before the old-fashioned hotbed falls into positive desuetude. There is, however, an art in the use and management of the hotbed, from which the hot-water apparatus is wholly exempt, and the basis of that art is the maintenance of the proper temperature, never allowing it to fall too low, nor to rise too high. There is, however, a great advantage which the hotbed possesses over the hot-water: it is, that the dung which has been used for its construction is just as fit for use when done with, or at any rate nearly so, as it was before it was formed into a hotbed. It is true that inexperienced persons in forming hotbeds of dung too frequently use the material in an unfit state; sometimes it has lain too long in the stable, heap, or hole, and has begun to scorch inside, or as the American gardeners term it, to be fire-fanged; sometimes it is taken from them in a good condition and laid in a heap at once, where the heat would be violent and short lived.

The proper condition can only be obtained by shaking out every forkful of it loosely, in order to let the air have a thorough passage through it. Every foot or two, as the new heap is made, should be sprinkled with water, unless it be already very moist. It should then be turned over, and shaken out until it be all in one heap again; here it will ferment, and by putting a long stake into it to reach the centre, you may feel whether it be getting too warm. If it be heating too much, shake it all out again into another heap, and water it where it dries. In shaking it out, the top will go to the bottom of the new heap, and you should contrive also to have the outside stuff of the old heap in the middle of the new, and *vice versa*. Water every foot of it, by gently sprinkling with a watering pot, with the rose on the spout; again put in the stake, and when the heat is getting moderated a little, you may mark out your space and build the heap for the reception of the frame and glass; but as you shake it out this time, keep putting it down with the fork, not to keep it too close, but to keep it well together. The space you intend to occupy should be marked out with four stakes stuck in the ground the height you intend it to be, or thereabouts, and this space should be about one foot clear all round the frame, and it should be built quite four feet high at first; it will sink nearly a foot. In building this square heap, you should be careful to press down all over alike; when this is done, the stake should be driven in to reach the centre of the heap, in order that you may draw it out to feel the heat every day; and when it rises a little, put on the box or frame, and three inches of good loamy soil from rotted turfs; whether you be going to grow things in pots, or cucumbers or melons in the soil itself, or sow seeds in it, is of no consequence; the soil keeps down the rank steam which would come through the dung, if not so covered. The frame glass should then be put on and covered closely, in the daytime; if the heat be too strong, it may be wetted considerably, but if it be only moderate, lift the light a little behind, to let out the steam. The bed, in this state, is fit for anything, for dahlias to break or strike in; annuals sown in pots will do after the heat is gone off a little; but for balsams and cockscombs, which are pricked out nearly as soon as they are up, it will not be too hot now. The seeds of cucumbers and melons may also be sown, though they ought to be ready to be put out, to have all the benefit of the heat from the first; still, they will do sown two in a pot, and heated in the same bed in which they are grown. We are not here giving the management of the contents of the bed, but rather of the bed itself. When the heat declines, which, as a matter of course, it will in time, it must be reinstated with fresh linings of hot dung; a supply of which must be kept for the purpose. With a fork you must remove all the dung that projects in front of the frame, close to the ground, and even undermine it a little, and against it pile up hot dung to fill the space occupied by that which was taken away, and there must be more in quantity, so as to form a bank up against it. This will revive the heat a good deal, and when it again declines, serve the back the same way, and eventually the two ends also. By these means the heat may be revived, and kept up for a considerable time, because the same process may be repeated two or three times over, so long as the principal mass of dung be not absolutely saturated; but a good deal of this may be taken out by undermining small portions at a time, and tucking in hot dung in the place made vacant. However, unless it be for melons or cucumbers, actually growing in the soil, it is better after the first linings all round to make up fresh beds to succeed. It is only in cases where the plants are actually immovable that we must spend a good deal of time and trouble to renew and retard heat, for if the subjects be in pots, it is far easier to make new beds and remove the plants than to keep up the heat of old ones.

GENERAL DIRECTIONS FOR POTTING PLANTS.

When a plant is placed to grow in a small earthen vessel, like a garden-pot, its condition is exceedingly different from that to which it would be naturally exposed. The roots instead of having the power of spreading constantly outwards and away from their original starting point, are constrained to go back upon themselves; the supply of food is comparatively uncertain, and they are usually exposed to fluctuations of temperature and moisture, unknown in a natural condition. For these reasons, potted plants are seldom in such health as those growing freely in the ground; but as the operation of potting is one of indispensable necessity, it is for the scientific gardener, as well as the amateur, firstly to guard against the injuries sustainable by plants to which the operation must be applied; and, secondly, to avoid, as far as may be possible, exposing them to such an artificial state of existence. That the latter may be done more frequently than is supposed, will be sufficiently obvious, when we have considered what the purposes really are that the gardener needs to gain by potting.

The first and greatest end attained by potting is the power of moving plants about from place to place without injury; greenhouse plants from the open air, and *vice versa;* hardy species, difficult to transplant to their final station in the open ground without disturbing their roots annuals raised in heat to the open borders, and so on; and when the power of moving plants is wanted, pots afford the only means of doing so. It also cramps the roots, diminishes the tendency to form leaves, and increases the disposition to flower. Another object is to effect a secure and constant drainage from roots of water; a third, is to expose the roots to the most favourable amount of bottom heat, which cannot be readily accomplished when plants of large size are made to grow on the ground even of a hothouse, and, finally, it is a convenient process for the nourishment of delicate seedlings; unless some one of these ends is to be accomplished, and cannot be effected in a more natural manner, potting is better dispensed with.

That it may be advantageously dispensed with in many cases, is evident from several facts, more or less well known. The nurserymen prefer pricking out their delicate seedlings into pans, or movable borders, instead of pots, and they always thrive the better. In conservatories, the necessity of shifting plants from place to place may be often avoided; whilst under judicious management, those which are planted in the open soil have greatly the advantage of others, both in healthiness and easiness of management, and there is no doubt that pine-apples will succeed better unpotted, if planted freely in soil exposed to a proper amount of bottom heat.

The exhaustion of soil by a plant is one of the most obvious incoveniences of potting. The organisable matter in a soluble state, contained in a garden-pot, must necessarily be soon consumed by the numerous roots crowded into a narrow compass, and continually feeding upon it. The effects of this are seen in the smallness of leaves, the weakness of branches, the fewness and imperfect condition of flowers, &c.; and the gardener attempts to remedy them by the application of liquid manure, by frequent shifting, or by placing his plants in pan feeders, shallow earthen vessels containing manure, to which the roots have access through the holes in the bottom of the pot. It is, however, to shifting more particularly that recourse is had for renovating the soil; and this, if skilfully performed, without giving a sudden and violent shock to the plant, is, probably, the best means, because the roots are thus allowed more liberty of distribution, and the earth is kept more open, than when consolidated by repeated applications of liquid manure. There is, however, a difficulty in shifting plants, without injury to their roots, in the midst of full vegetation, and at such times the application of liquid manure is preferable, when the soil requires renovation.

It is not, however, by mere exhaustion that potted plants render the soil unfit for their support. Every one knows that the soil of a farm will not bear, year after year, the same kind of crop; but that one kind of produce is cultivated on a piece of ground one year, and is succeeded by some other kind, which practice, in part, constitutes the important system of rotation of crops. Not, however, to refer to matters extra-horticultural, it is notorious that an ample orchard will not immediately succeed upon the site of an old orchard of the same kind of fruit, and that no amount of manuring will enable it to succeed; a wall-border, in which fruit-trees have been long grown, becomes at last insensible to manure, and requires to be renewed; and, not to dwell upon an undisputed fact, dahlias do not like the soil in which dahlias were grown the previous year. This class of phenomena cannot be explained upon the principle of soil being exhausted, because that exhaustion is made good, and yet to no purpose; unless we assume that land contains something mineral which each species prefers to feed upon, and which is not contained in manure; but the slender power of selection possessed by the roots of plants would be unfavourable to this supposition, even if it were open to no other objection.

It has of late years been thought that the excretory functions of the root would explain the deterioration of soil, and that the reason why plants cannot grow year after year in the same soil, if it and their roots be disturbed, is that under such circumstances they are perpetually brought into contact with the matter of which nature had previously relieved them, this matter being considered to be unsuitable to themselves, although harmless to different species. The subject has hitherto been so little investigated, that it is not safe, perhaps, to take it as a basis of a theory; but it certainly appears to offer a more probable explanation of the deterioration of soil than any other yet proposed. There are those, indeed, who seem willing to deny altogether that soil is deteriorated, and cases are adduced of perch trees not repotted for twenty years, which did not die; of strawberry beds not renewed for a long series of years, which still bore fruit; but I do not know that any one ever asserted that trees would perish if replanted in their own deteriorated soil; it has only been said that they would become unhealthy and unproductive; and I think few gardeners will deny that neither has it been pretended that the root secretions of every plant are deleterious at all. It is quite conceivable that one plant may secrete a deleterious matter that is very slowly decomposable, but which, nevertheless, may be soluble enough to enter into the food of other roots, and in such a case an injurious effect may be produced; whilst in another case, the secreted matter may be rapidly decomposable, when it will enter into new combinations, and lose whatever deleterious property it originally possessed, if any. At all events, be the theory what it may, it is an undoubted fact that soil is deteriorated by a plant which has been grown in it for a long time, and that to be continued in a healthy condition that soil must be changed. This explains why potted plants carefully attended to and often shifted, are so much more healthy than those treated otherwise. It is not, however, merely for the purpose of removing deteriorated earth or adding manure that shifting is important; all potted plants have in time their ball of earth, by the continual passage of the water through it, reduced to a state of hardness and solidity unfavourable to the retention of moisture or the growth of roots, and this is, of course, cured if the operation of shifting be judiciously performed. I must, however, confess, I have seen gardeners contented with lifting a plant, with a hard old matted ball, out of one pot into another of a little larger size, shaking some particles of fresh earth in between the ball and the side of the pot, and pressing the whole down with as much force as the thumb can give.

It is found that the roots of potted plants invariably direct themselves towards the sides of the pot, as must indeed necessarily happen in consequence of their disposition to grow horizontally. Having reached the sides they do not turn back, but fall on the earthenware surface, till at last they form an entangled stratum, inclosing a ball of earth; then if not relieved by repotting, they rise upwards towards the surface, or they attempt to force themselves back to the centre. The greater part, however, are always found in contact with the porous earthen side of the vessel, and especially all the most powerfully absorbent, that is, the younger parts. They are, therefore, in contact with a body subject to great variations of temperature and moisture, in consequence of exposure to the sun, or to a dry air in motion, unless in those rare cases where the air is kept, by artificial means, shaded, and uniformly damp. By these means in a dry summer day, when the leaves are perspiring freely, and, therefore, requiring an abundance of water from the roots, the latter are placed in contact with a substance whose measure is continually diminishing; or in a greenhouse where the pots are syringed, the heat of the earth in contact with the roots is lowered by a copious evaporation from the sides of the pot, just when, in nature, the bottom heat should be the greatest. The evil consequences of this are well known to gardeners, who never take sufficient precautions to prevent it. Greenhouse-plants exposed to the open air in summer always differ from the irregular condition of the sides of the pots, whence the common practise of plunging them in the earth for the purpose of bringing them into the condition of plants growing in the open air. This is, however, attended with some disadvantage, for the plants root through the bottom of the pots, or over the edges, amongst the earth in which they are plunged, and when taken up in autumn for removal into the greenhouse, they must have all such roots cut off again, for there are no means of bringing them within the limits of a pot. For these and similar reasons, no good gardener will expose his greenhouse-plants to the open air in summer, *if he can help it*, unless they be duplicates, or unless there be some object to be obtained very different from the strange notion that they are hardened by this process. The effect that is really produced upon them is to give them a sort of artificial winter in the summer, that is, to expose them to a period of comparative rest from growth, which in many cases is useful.

The inconveniences to which we have been alluding are principally sustained by plants in small pots; when the quantity of earth is considerable, as in tubs, or the largest kinds of pots, the loss of water through the sides is of little moment, and the variation of temperature is more than counteracted by the large surface exposed to the direct influence to the solar rays. In these cases the perfect drainage of superfluous moisture is often of the greatest service. Plants of every species are more or less affected, but not at all injuriously, by having the sides of the pots fully exposed to the air. The taste and flavour of the peach and nectarine, and still more of the strawberry, are greatly improved; and the fig-tree in the stove is made to afford a longer succession of produce, owing to the succession of young shoots, which are caused to spring from its large branches and stems; and in all cases when trees can be made to retain their health in exposed pots, the period of the maturity of their fruit is very considerably accelerated.

It appears to be nothing but the complete drainage to which they are then exposed that makes the orange and all its tribe, naturally the inhabitants of the hill sides of the temperate parts of Asia, thrive best when the roots come in contact with the sides of the pots, &c., in which they grow. In all cases, the draining should be most carefully secured by placing an abundance of broken tiles, potsherds, &c., in the bottom of a pot, so as to prevent the stagnation of water about the roots.

Mr. Macnab, in his excellent practical treatise upon the cultivation of cape heaths, points out very forcibly the value of good draining to that class of plants. There is scarcely any danger, he says, of giving too much drainage, and in order to effect this essential object still more perfectly, he, in shifting his heaths, constantly keeps the centre elevated above the level of the earth in the pot or tub, so that at last each plant stands on the summit of a small hillock.

In order, however, to counteract the risk of excessive drainage, without in reality diminishing it, great advantage is derived from the introduction into the earth of fragments of some absorbent stone. Mr. Macnab used coarse soft free-stone, broken into pieces, from one inch to four or five inches in diameter, because in summer these stones retain moisture longer than the earth, and in winter allow a free circulation of any superabundant moisture.

If woody plants be allowed to remain growing in the same pot for many years, as is sometimes the case, one of two things must happen; either the roots, matted into a hard ball, become so tortuous and hard as to be unfit for the free passage of sap through them, or they acquire a spiral direction. In either case, if such plants be turned out of those pots in a conservatory or in the open ground, with a view to their future growth in a state of liberty, new roots will be made with difficulty, and it will be a long time before the effects of growth in the free soil will be apparent.

When the spiral or corkscrew direction has been once taken by the roots, they are very apt to retain it during the remainder of their lives; and if, when they are large trees, they are exposed to a gale of wind, they readily blow out of the ground, as was continually happening with the pinaster some years ago, when the nurserymen kept that kind of fir for sale in pots. In all such cases as these, the roots should be carefully disentangled and strengthened at the time when transplantation takes place.

If, however, a potted plant be managed in the most perfect manner, no such entanglement or coiling up will take place. In order to be managed perfectly, a plant, when young, should be placed in as small a pot as it will grow in, and it should be gradually and successively transferred to larger pots as it advances in size. If this be done, the warmth to which the pot is exposed will be more immediately felt by the roots. The latter, as they grow, will ramify regularly all through the mass of earth, which, moreover, will be thoroughly drained ;but if, on the other hand, a very small young plant be placed at once in a large pot, and left to grow there, the drainage will be less perfect, the large mass of earth will be less sensible of the heat to which it is exposed, the roots will, from the first, take a horizontal direction towards the outside of the pot, and once there, will follow its surface, as has been already stated, exhausting the small quantity of earth with which they are then in contact, and profiting little or nothing by the main body of soil in the interior of the pot. As the proper manner of potting plants is of the first consequence, we cannot effect our object more satisfactorily than by transcribing the following mode of treating the balsam, by the Rev. William Williamson :—

"As soon as they have got four leaves, I transplant them singly into the smallest pots I can procure, and in such a manner that the stem of the plant may be covered somewhat more than it was at first, and then all are to be again placed in the frame. In a short time, if there be a sufficiency of heat, that part of the stem which is covered with the mould, puts forth the fibres by which nourishment is conveyed more immediately to the principal stem of the plant. As soon as the plants are a little advanced in growth, they are again removed, if possible without disturbing the earth, into somewhat larger pots, still planting them rather deeper than before. The same process is repeated five or six times, till at last they are removed into their final pots. I have found it best to give them their last removal after they have opened their first blossoms, as it gives additional brilliancy and size to the flowers. By following this method, the plant acquires extraordinary vigour, throwing out its branches from the surface of the mould, exhibiting flowers nearly as large as a full-blown rose, and a stem measuring two, and sometimes three inches in circumference."

The plan of continually sinking the stem with every succeeding potting is useful to the balsam, because it puts forth roots in abundance from its stem, and to all plants having the same property the same practice is desirable, but not to others, which, if their stems do not root as fast as they are buried, will suffer injury by the sinking.

It is by paying constant attention to the shifting of the growing plant, by the employment of a very rich stimulating soil, and by a thorough knowledge of the kind of atmosphere which suits them best, that have been obtained those magnificent pelargoniums, cockscombs, balsams, and similar flowers, which have so often justly excited the admiration of even the most experienced gardeners.

SUBSTITUTE FOR BELL-GLASSES.—An easy method of striking cuttings may be had recourse to by providing some squares of glass large enough to cover the pots intended to contain your cuttings. If the corners of these squares are taken off, they will not be liable to be disturbed or broken. Before the cuttings are planted, let the pots be two-thirds or half filled with earth, so that when planted they do not touch the glass. By this method the enormous expense of bell-glasses and much time is saved, as the squares do not require drying, but merely turning once or twice a day when they become damp.

DISEASES OF MELONS, AND THEIR PREVENTION NOTICED.—Many gardeners experience much difficulty from the effects of red spider and canker in melons, the former being caused by keeping them too dry, and the latter arising from too much moisture. In order to avoid these evils, the following directions should be particularly attended to :—When the weather is hot, or there is a strong heat, it is necessary to be free in the application of water, especially round the sides of the boxes ; for when the plants cover the bed, it will not be requisite to give any in the centre over the stems. When the plants cover the bed, always water without a rose, observing that it should invariably be done early in the morning, and when the weather is fine, so as to allow the vines to get dry before night, which would not be the case if watered in the afternoon; and should the weather prove dull the next day or two, or three days, they are sure to become cankered. The only mode of cure for the canker is to keep the plants dry, and give a good heat ; being careful at the same time not to run into the other extreme, by assisting the generation of red spider. But if the plants are kept thin of vine, and water be applied in the manner before directed, no fear need be entertained of either of the disorders.

SEPTEMBER.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN SEPTEMBER.

DAHLIAS. — Those who exhibit these flowers should attend to the shading of the intended blooms. It is not advisable to begin too soon; when two or three rows of petals are expanded, if the weather be hot, they should be covered; there are many opinions as to which is the best mode of shading, also the quality of the material for the purpose. Painted tin, millboard, paper, calico, and garden-pots are made use of, and from under all these varied covers, good blooms are produced, so that it is difficult to say which is the best. We have found calico, without even oil or paint, a most excellent and cool shade. The following experiment is worth a trial, and will readily prove which is the coolest covering for blooms. Place two shades, one of painted tin and one of calico, without either oil or paint, in the middle of the garden, three feet from the ground, and two feet apart—when the sun is out powerfully, put under each cover (at the same distance you would place a bloom) a small cake of virgin wax, or hard butter, and you will soon discover which melts the article the quickest. A thermometer cannot conveniently be applied to this purpose.

CARNATIONS AND PICOTEES.—Look well after the seed, do not lose any if possible, for good seed is valuable. Attend to the layers already taken off; you must not keep them under the glass any longer than necessary; as soon as you find them looking firm, and the foliage not hanging about the pots, gradually remove the glasses, and give them the benefit of the sun and air, and keep them only moderately moist. For further instructions see last week's operation.

PINKS.—The beds for the reception of the plants intended for next year's blooming, may now be finally prepared and marked out ready to receive the plants. The usual width of the beds is three feet six inches, and six rows (in parallel lines) are generally planted. When the beds are properly made up to the width described, commence three inches from either side, and draw six lines from end to end, at six inches from each other. This done, cross them again at every six inches, which will give you so many squares, and at the angle's of every square a plant should be placed; by attending to this correctly, the bed looks neat and uniform. It is customary with many good growers of these plants, to place at the bottom of their pink beds a six-inch layer of manure, at about six or eight inches from the surface, and an excellent plan it is. If the soil be of cold and retentive quality, use horse manure, and if of a sandy and open texture, cow manure will be most proper and beneficial. Our experienced readers are fully aware that pinks require rich soil to flower them in perfection; we beg, therefore, once more to remind the uninitiated that they must not neglect furnishing the beds with a good supply of manure before they finally prepare them for planting.

AURICULAS.—The attention recommended in last week's operations is all that is necessary at present.

ANNUALS.—Some of the annuals which are worth sowing to bloom during the winter, should be now sown in pots or boxes, or may be kept in the frame till the latter end of the month, when they should be removed to the shelves near the glass in the greenhouse. Two or three kinds of schizanthus, intermediate stock, mignonette, brachycome, erysimum, and nemophilla may form part of this sowing. The selection should by no means be extended promiscuously, or even very much extended at all.

AUTUMN FLOWERS.—Look well to the plants of different kinds intended to produce blooms through the autumn and winter, and see that they are kept in a growing state. Chrysanthemums, cinerarias, pelargoniums, silvias, heliotropes, and plants of this habit should have their roots attended to; and if they require it, they should get a shift; but it is advisable not to grow them on too freely, as this would rather check their flowering. The pelargoniums, silvias, and heliotropes, during all the early stages of their growth should have their young shoots frequently stopped, so as to induce nice bushy plants, which then produce plenty of flowers. By this time, the stopping of them must be discontinued, and the plants should get less water, so as to be matured and rested, before they are required to develope their flowers. Cinerarias should be potted rather more liberally, and grown on freely; the larger they are grown the more blooms are produced, and, consequently, the more showy are the plants.

BULBS. — The Dutch bulbs, such as hyacinths, narcissuses, jonquils, tulips, &c., cannot be dispensed with where flowers in the winter are the object. The great fault as respects these flowers is the purchasing of them late in the autumn. For early flowering, especially, they should be selected this month, and be potted and plunged in some cool place, beneath five or six inches of coal ashes, old tan, or some such material. The object of this is to set them growing at the root; in fact to have the roots pretty fully developed before the leaves are excited, the reverse of which happens when they are potted, and at once, or nearly so, removed to the forcing-house.

CHRYSANTHEMUMS. — These plants will now be advancing considerably, and will require good attention. Let them be occasionally repotted, according to the size of the pots to which they may be limited, and the size the plants are required to be of. When arrived at a blooming state, keep them regularly and thoroughly watered, sometimes using manure water, or their foliage will exhibit manifest evidence of neglect, by the bottom part of the stem turning yellow or falling off. Stop the very strong shoots for bushy plants, but it must not be continued any later. Small plants a few inches high, though they produce much smaller blossoms than the stronger plants, are, nevertheless, very pretty. There are two ways of obtaining them, either lay the points of the blooming shoots into small pots, and remove them when rooted, giving them a shift, or take off the tops as cuttings, and root them in a close but very mild hotbed. In either case, the plants when sufficiently rooted, are treated like established plants.

PRIMULAS. — Now sow a few in order to provide a succession of plants; the double ones which do not produce seeds may be propagated by division; cuttings of them may also be planted. In dividing them, take the old plants and separate them into as many pieces as there are single hearts or shoots, and get as many of the old roots attached to each division as possible. Those pieces to which no roots can be obtained must be planted in cuttings, and will root readily enough if kept close for a time. Pot the others in light soil, composed of equal parts of sandy loam and peat, and place them in a hotbed, where they will get a gentle bottom heat; when they are rooted freely, shift them into larger pots, and place them into an ordinary greenhouse, not exposing them too suddenly. Pick off all the bloom that appears. In October, shift them into their blooming pots, which may be six or eight inches in diameter, according to the size of the plant, and the convenience for growing it. They must not have *too large* pots for the quantity of roots they possess, and must be well drained. They will continue to bloom in November, and will continue for several months in succession. After blooming, rest them till the following July.

CALCEOLARIAS.—The old plants as they go out of flower should have the flower stem cut away, and the surface soil renewed. The plants should then be put in a cold fame, and encouraged to produced young shoots, which are required for propagation. Young stocks should be raised every year; the shoots produced after flowering, root freely, and make strong flowering plants for next year. If any cuttings have been already rooted, get them potted, and shifted on as rapidly as possible. Calceolarias grow well in rotted turfs, grassy turfs, or heath soil.

FUCHSIAS.—This is a good time to propagate a stock of young plants of any kind that may be required. The specimen plants blooming in pots will require abundant supplies of water, for they absorb large quantities; if the pots be getting full of roots, the strength of the plants must be kept up by using manure water; apply it in a clear diluted state at every alternate watering. The plants for autumnal flowering may now get their final shift.

CREEPERS.—These require good attention to keep them from running into confusion. When they have done flowering or nearly so, thin out the shoots a little, that the rest may have a good opportunity of maturing themselves. Some of the earlier habited kinds may be pruned for flowering early next year. Where they are still in bloom, it is by no means desirable to sacrifice the flowers, so that all that can be done in their case will be to check the barren shoots and prevent their running into a confused mass.

TROPÆOLUMS.—When any of the bulbs exhibit signs of growing, they must be potted for flowering next April; give them full-sized pots at once. Nothing suits better for a trellis for these plants than an informal twig. A young tree of larch of suitable size is excellent for the purpose.

CACTI.—Where these have been placed out of doors, thoroughly exposed to the sun, in order to ripen their growth, which should always be done, they will now require either to be removed under shelter, or protected in some way, from wet chiefly, but also from cold; this applies to tho free flowering kinds, such as the species of epiphyllum and cereus. The melon cacti are not so frequently placed out of doors.

MIGNONETTE.—Sow a good batch in five inch pots in light sandy loam, and let them stand in a frame with plenty of air for some time; by-and-by they must be removed to the greenhouse; thin out the young plants so that they stand in a circle, about an inch and a half apart, near the edge of the pot.

NEAPOLITAN VIOLETS.—Early in tho month get these potted into pots corresponding with the size of the plants. They may be kept during winter in a framo well protected in cold weather, or set in front of the greenhouse.

WALLFLOWERS.—The young plants of the double varieties, which should be kept in pots in the cold frames through the winter, should be set in a sheltered place, where they will not get too much wet. Tho seedling plants of the single kinds may be planted out permanently, or into beds, to stand till the spring.

PERENNIALS.—All the earlier blooming kinds may be taken up and divided, if increase be required; if this be not wanted, and they are grown too large for the position they occupy, take them up and reduce tho size of the plant, re-plant it; generally when the plant grows into a broad tuft, the outside portions are the most vigorous, and some of these should be planted instead of the central part of the tuft. The late flowering kinds now in bloom are not to be disturbed till the bloom be past.

PANSIES.—Propagate theso for preserving through the winter, either in pots, or in a dry sheltered nursery-bed. In order to get some of these early in bloom next spring, prepare a bed of rioh light soil, and plant it with strong-rooted cuttings; shelter them by means of hoops and nets in rough weather, and they will progress rapidly, and bloom early.

GENERAL ROUTINE.—Operations of routine become very essential now to secure neatness and good order. Many of the plants will have past a blooming state, especially the annuals; these should be pulled up or cut down according to their nature, and tho dead littery-looking stems removed. The leaves of many deciduous trees will commence falling, and being scattered about by the wind, will require to be removed from the walks and borders.

SECOND WEEK IN SEPTEMBER.

AURICULAS.—These plants are now growing fast, and proper attention should be paid them. Move the surface of the soil in the pots, and keep them clear of dead leaves and weeds. Search for caterpillars, and other destructive insects. If the green flies are in the hearts, put a little dry sand on them; leave it for a few minutes, and then blow it out with a little force, and the fly will be driven out with the sand.

PINKS.—By well watering the beds, being certain that the soil is wet to the depth of four inches, you may proceed with the planting out without fear of loss; the dew now affords great assistance to these plants.

CARNATIONS AND PICOTEES.—Tako off all layers as often as you find them rooted. Do not confine yourself to a fixed rule; this work should be done when the plants are ready, and the sooner the plants are removed from the old stools the better and more safe they will be.

DAHLIAS.—Follow the directions given in last week's operations. The plants generally have improved a little, but aro still going on slowly.

CHRYSANTHEMUMS.—These are the chief of autumnal flowers, and plants will now be required for the decoration of the conservatory and other greenhouses. If they be grown in pots, and are not yet placed in their blooming ones, this should now be done; if they are planted out, they must be taken up and potted; in doing which some care is necessary that tho plants be not checked, nor the leaves turned yellow. They must be taken up with as much earth and roots as possible, potted comfortably in pots of sufficient size, placed in some sheltered shaded situation, and well supplied with water; if this be dono they will not suffer much.

PRIMULAS.—Repot them in succession, so as to furnish blooming plants through the winter. It is a good plan not to bestow much pains on thoso which have not thrown flowers, for by attending to this, the very best may be selected, and as these plants vary very much when raised from seed, it is worth attending to. There is scarcely a flower in which the advantage of saving seeds, only from those which bloomed in good "strain," is more apparent in the progeny than in this.

GERANIUMS.—As they go out of flower, the plants must be cut down, and when they have shot out afresh, re-potted into smaller pots, the young shoots being thinned to a proper number, conveniently placed to form a handsome bushy plant. If more stock plants he required, the cuttings may he planted, several in a pot in which they may be allowed to stand during the winter. Those intended for autumn and winter blooming must be so managed as regards stopping and removing the flower huds, that some of them may he had in succession throughout this period of the year. The best plan is to discontinue the stopping a certain number, proportionate to the stock, say every fortnight. Seedlings should be encouraged, so as to get strength to hloom finely by the spring. Rooted cuttings should be potted singly into pots, in sizes proportioned to their strength.

CALCEOLARIAS.—The middle of this month is an excellent time for propagating calceolarias by cuttings; consequently, the stock should then he filled out, and as soon as the young plants are rooted, they must he potted singly, and from time to time re-potted to got them strong enough to bloom finely in the following spring. Get the seedlings potted ou for blooming in good time in the spring.

CINERARIAS.—The earliest plant of these excellent winter flowers should be helped forward by being re-potted, and furnished with a weak, clear manure water once in a week; and successional supplies must he prepared by potting a few of the forwardest plants at short intervals of time. If the opportunities that have presented themselves of ohtaining a sufficient number of stock plants have not been taken advantago of, growing plants which will come in late may still he had hy slipping off some of the suckers from the hase of the growing plants.

WINTER FLOWERING PLANTS of all kinds should now meet with especial attention. Have tho blossom buds removed continually yet, so that nono of the energies of the plants may be expended in tho developement of flowers before they are actually required. It is requisite that they should be well sheltered in a frame that is protected from all rain and cold, but allowed plenty of free air by tilting up the sashes, or removing them entirely when the weather is mild.

CROCUSES, NARCISSUSES, FRITTILARIAS, LILIES, IRISES, SNOWDROPS, JONQUILS, EARLY TULIPS, and many other subjects, though quite as well planted next month, and not much worse the month after, gain strength by early planting, and may be done with advantage in places where the borders, beds, or grounds, are at liberty in any part of the month. Narcissuses and jonquils, when planted in borders, must be placed further hack than hyacinths, as they are generally taller, particularly the large sorts of narcissus. Regard must also he had to the colours, as those of white and yellow are very striking. Early tulips are only fit to grow up in horders alternately with hyacinths; they are very brilliant, and the greater part of them are not much taller. Snowdrops look well anywhere, hut best at the foot of a shrub, or under trees, anywhere in the shade, and always require to he in tolerably large patches, or they look insignificant. Crocuses are often placed as a sort of inner edging, which to us is very mechanical, and anything but effective.

OXALIS.—Many of these may now he potted for early flowering. *Oxalis cernua* is a fine yellow flowered one; *Oxalis versicolor* is also a favourite, and, and there are many other fine ones.

CAPE BULBS, if not potted last month, should be got in now, and the pots set on some of the shelves in the greenhouse. Water them with moderation until they begin to grow. It is a good plan to lay some moss, just damped, on the surface, to keep it from drying, and thus prevent much of the necessity of applying water.

TRANSPLANT PERENIAL PLANTS.-Prepare for planting various perennial and biennial flowers which were raised in the spring and beginning of summer, such as carnations, pinks, and sweetwilliams also seedling wallflowers, stocks, July flowers, and columbines, with many other sorts, both seedling plants and such as were raised from slips, offsets, layers, pipings, &c.

HEDGES.—Finish clipping all such hedges as still remain untrimmed, and let this be done the middle of this month, before the shoots get too hard. Observo in clipping young hedges under training, to take particular care not to cut them too closo down above, but run tho top off regularly, so as the stronger and more moderate shooting plants may advance as equally as possible, and cut the sides with similar care.

RANUNCULUSES AND ANEMONES.—About the middle or towards the latter end of this month prepare beds for the best ranunculus and anemone roots, which may then be planted, or any time till the end of October and November, in open, mild, and dry weather, in separate beds, alone or in the borders, &c.

Greenhouse Plants.—During the greater part of this month greenhouse plants, excepting the very delicate species, may be allowed to remain out in the open air, and they will be benefitted by the exposure, provided they can be sheltered from strong winds and heavy rains. Towards the end of the month they will, however, require to be removed to some intermediate place of shelter for a time, or at once to the greenhouse, or if neither of these courses be adopted, the plants every night may be protected.

Watering Plants.—Except in the case of plants in bloom, all of these must have their supply of water gradually limited as the season declines, from this time forward. Water is best applied to plants in the morning. Be more than ever cautious not to allow water to stand in the feeders in which the pots are placed.

Cyclamens.—The spring flowering ones should be re-potted, and put out all night during the blooming season. The others may be gradually allowed to become partially dry during their season of rest.

Begonias.—Some of these, especially *Begonia manicata*, and *Begonia hydrocotylifolia*, which flower beautifully in spring, and are very handsome plants, should about this time be potted, and set to grow on steadily through the winter. When plants, as in the case of these, are set to grow in the winter they must be very carefully watered; it would greatly injure them to get too much, at the same time they ought to have enough.

THIRD WEEK IN SEPTEMBER.

Auriculas.—The attention before recommended will still be necessary. It is important that the surface of the soil should be slightly stirred as often as it appears closed, which will arise from frequent waterings, as also from rain. The health of the plants depends on a proper circulation of air through the soil, and great injury occurs from the surface being allowed to remain closed for any length of time. The soil sours, and imparts an impure atmosphere to the roots, which brings on the canker and other diseases these plants are subject to.

Pinks may now be planted freely; the weather is particularly favourable for such work. The beds should be kept clear of weeds between the rows of those planted out, or they will soon overgrow the plants, cover the numbers, and cause great confusion by obliterating the figures on the number sticks.

Tulips.—It is time now to think of preparing the beds for these bulbs. They are generally occupied by the carnations and picotees during their blooming and layering. If they can be conveniently removed, the soil should be thrown out to the depth of from two to three feet, and turned over once or twice a week; it is necessary to sweeten it well before planting. A little manure may be given, but it should be towards the bottom of the bed only, and well decomposed, two or three years old at least; for if not in a proper state it will flush the blooms. Many florists will not, on any account, use manure, preferring turfy loam chopped tolerably small, and laid at the bottom of the beds. There is considerable nourishment in this sort of earth, and the flowers do well when planted in it.

Bulbs.—Purchase these as soon as they are imported, and according to the uses you are going to put them to, so you must dispose of them; if they be for forcing, the sooner they are potted, and put into a dark place, the better. They will not make any progress for some time, and it is a common and perhaps any easy plan, to place them together, in the part of the garden where they would be most out of the way, after they are potted, and to cover them four inches with sawdust, dry tan, or ashes. From this place they are taken from time to time, as wanted, and placed in the forcing frame or pit, to be forwarded according to the period they are wanted to bloom. This will apply to all bulbs that are to be forced, or grown, or bloomed in pots.

Hyacinths.—Half of such as are to be bloomed in water should be immediately placed in their glasses, and taken into a dark cellar or cupbord at once. Care must be taken that the water reaches the bottom of the bulb, until the roots be sufficiently developed. Change the water once in three weeks. The other half must be kept in the dry for a month longer, before they are put in their glasses. Those hyacinths destined to be planted in the open ground may be planted in two seasons, or both the early and late flowers at the same time, but not in the same bed. It is certain that there is as much as three weeks' difference between what is called the early and those considered late, and for planting out of doors in a bed, the one is quite incompatible with the other. Wherever the bulbs are purchased, the most distinct instructions should be given, that all the assortments must be picked to bloom at the same time. In planting hyacinths in borders, they look best in groups, including all the colours, or alternately, the three light and the three dark. For instance, dark red, dark blue, and yellow in one; and light red, light blue, and white in the other. Many, however, plant three of a colour in one patch, and so have all the patches of a self-colour—every six patches the colour comes over again; we prefer having three different or six different colours in every patch.

Tender Plants in the Borders and Beds.—Towards the end of this month you must take up all the geraniums, verbenas, petunias, fuchsias, calceolarias, and other tender plants, that have been potted out, and are wanted again, otherwise they are just as well out of doors to live as long as they will. If they be still flowering, they may keep on till the frost stops them. Such, however, as are valued, should be taken up and repotted, and the heads should be cut in rather sharply. The cuttings may be crowded into a small pot, and allowed to take their chance in one of the garden frames, where, if they be watered occasionally, they will most likely strike root, and be useful in the spring.

Flowers in Pots.—The choice kinds of potted plants should now be placed in a warm situation, under a wall or hedge, or closely together in such a way as they may be guarded from bad weather when necessary; if the soil be naturally dry, a bed of sand may be formed in which to plunge them. They should be sunk quite to the rims of the pots, previously dressing them, and stirring the surface of the earth. If the whole surface, after they are regularly plunged, were covered to the depth of two or three inches with old tan-bark, or sawdust of timber not resinous, none but severe frosts would hurt either the plants or the pots. By the help of mats, oil-cloth, or canvas, they might be d fended from very severe weather or too much wet; those plants which are tall, or in danger of being hurt by high winds, should be neatly dressed to sticks, with shreds of fresh matting. There they will be in store, and in readiness for removal to the house at pleasure.

Plants from the Nursery. — Preparation must now be made from the plants from the nursery, that are now to be brought into the garden. Let the borders be examined, as to the condition of their soil; some will be found exhausted, others only stiff for want of digging. Labour is required for these, but for the others labour and manure.

Annuals.—Various of the most interesting sorts should be sown in small quantities for turning out early, as well as to grow for the conservatory. A considerable sowing of mignonette should be made as also of the intermediate and ten week stocks. As soon as the plants are up, great attention must be paid to giving air at all favourable times, to prevent the plants drawing up weakly, and also to watering them, as they are very liable to rot off, if kept too moist.

Fuchsias.—Any that are getting shabby should be gradually brought to a state of rest, by withholding water. They will push the earlier next season: keep such as are in perfection carefully watered, reducing the quantity as the days shorten.

Chrysanthemums. — Where these have been planted out in order to obtain large strong plants, they should now be taken up very carefully, and potted, and placed in a close house, till they have recovered their move. If they have been grown in pots, give them a final shift; they will be benefitted by supplies of clear manure water. Very neat interesting plants are formed by taking off the points after the buds are formed and striking them as cuttings.

Calceolarias.—Increase the good herbaceous sorts by offsets, and by cuttings of the shrubby sorts; Kayana is amongst the latter class; seed may be sown early this month, the plants of which will flower early in the spring: sow in a slight heat, and push them on. Use peat and sandy loam.

Geraniums.—Bring into the greenhouse or flower pits every plant that is about to be retained. The scarlets are generally left to perish in the ground, but those not preserved should be dug up, and taken to the compost heap. Some are so compact and beautiful, as to deserve the most careful lifting, and replacement in pots of loam and leaf mould. All the rooted cuttings should also be either potted or placed in dry pits; in a word, every greenhouse plant that is in the ground should be moved without loss of time to pits or glazed erections, and if potted should be kept closer, and in shade, till their roots take hold of the soil.

Dahlias. — Thin the spray and weak shoots when thick: tie up the branches, and shade the best flowers. From the show plants pick off and throw away every bud bloom, also the fading blooms, except such as are kept for seed. Gather seeds early, Striped varieties commend themselves as border ornaments.

Primulas. — Repot as necessary, and encourage a few with a warm corner for early flowering; by this means, and having plants of different ages, a very long succession of bloom may be kept up.

Roses.—The chinese and tea-scented may be slightly pruned, and cuttings made of the prunings; these will root freely under a hand-glass, or even in a sheltered border; put the finer hybrids in pots, and strike in a slight heat or in the greenhouse.

Wallflowers may still be planted out in masses throughout the borders; stick the double sorts, and keep and grow as many as can be accommodated.

Violets.—Pot up from the open ground, and plunge the pots in a sheltered place, watering very carefully, as they suffer much if water be allowed to stagnate round them.

FOURTH WEEK IN SEPTEMBER.

Auriculas.—Particular attention should be paid to these plants at this season of the year. The night dews and rain rapidly decompose the dying summer foliage which is now fast leaving them, and giving place to the more compact and healthy foliage of the autumn. As soon as you perceive the leaves appearing wet and pulpy, remove them immediately, for if allowed to remain they will melt down to the stems, and in many cases create a disease which will carry off the plant. A few minutes every other day will be sufficient to prevent such accidents.

Pinks.—It is now time to think of collecting in the new varieties you intend adding to your collections: the early struck pipings must now be in fine condition for planting out. The beds should be completed by October, that the plants may have time to get rooted before the winter sets in.

Carnations and Picotees.—Continue taking off the rooted layers; pot and treat them as directed in a former number.

Anemones.—Beds should now be got in readiness for these as well as for ranunculuses, and tubers of each may now be sown.

Annuals.—A few of the best of the North American annuals should now be sown thinly out of doors, to stand through the winter; if for borders, they may be sown in patches where they are to flower, but if required for beds, it is rarely the case that the beds can be so occupied, and then they must be sown in some sheltered spot, and transplanted in spring. The selection of kinds may be determined by fancy.

Transplanting Perennial Flowers.—The slips of hardy perennials made about the end of July, or beginning of August, will be fit for transplanting about the end of the month. Such as are weak and not well rooted may be delayed a few weeks, or till February. At this time also may be transplanted any seedling perennials sown in spring, or the early part of summer, which have or have not been pricked out. The manner is entirely an object of fancy.

Digging the Borders in the Flower Garden.—Let all vacant places be dug over, such as the spot where patches of annuals have grown, and prepare patches for crocuses, snowdrops, narcissuses, or the like, about the borders, or where it may be intended to plant them in that way. Also get ready the beds for all sorts of bulbs, which will require to be planted next month. Hoe and weed all beds or patches of perennials, and otherwise clear the walks and ground, as they may require; clearing away decayed annuals, flower stems, or dead haulm.

Oleanders.—Cuttings of these may be planted now, to furnish young plants for forcing into flower in the spring. If kept in the greenhouse during winter, and potted and removed to the stove in March, they will flower in April.

Violets should be treated in a similar way as recommended last month, choosing the strongest roots, and potting as many as are likely to be wanted.

Roses.—Continue the examination of the budded stocks, and untie them, so as to free them from confinement, which checks their growth. If they have united and begun to swell, or grow, the ties may be removed altogether, but as they advance to any length, so that the wind can disturb them, they must be supported by being loosely tied to a stick, which must be fastened in the shoot for that purpose; otherwise the wind is often strong enough to break a bud out; the length of the shoot forming a perfect lever, against which a very moderate wind would be fatal. See also to the shoots that come out from any part of the stock, and cut them off.

Tender Plants, Succulents, &c.—At the latter end of the month, according to the state of the weather, it will be proper to take in many tender plants that otherwise might sustain injury, as the nights get cold, and frosts or cold dews now begin to fall. The succulent kinds should also be taken in, the weather now becoming too cold and humid for their remaining out of doors without being injury. Previously to planting the plants in the house, they should be pressed, and the pots should be cleaned from dirt, or a green mouldiness that often adheres to them in damp seasons. Any of them that were not shifted last month, when the plants were generally revised, may be shifted at this time if thought necessary, before taking them in. The stages for their reception must be cleared of such of the annuals as have done flowering, as the early balsams, &c., or by returning the stove plants to the compartment, if any of these have been placed in the greenhouse in summer.

Half-hardy Plants.—The propagation of a full supply of these must be carried out with energy; for on the preparation made now, so far as materials are concerned, will depend much of the variety and beauty of the flower garden next summer. The plan of planting the cuttings pretty thickly in moderate sized pots should now be adopted. It is essential to success that whilst the cuttings are not so far exposed to an arid atmosphere as to cause them to shrivel, they may not be kept too damp and close, for in the latter case they will decay rapidly.

Cacti should now be placed in a perfectly dry greenhouse where they should remain until they are required for forcing, receiving no water, unless they shrivel up too much.

Alpine Plants.—Where these have not been separated and repotted, it may be done now, as previously directed; a collection of the variegated leaf species is a pretty and interesting feature in a rock garden.

Hyacinths.—These and the other Dutch bulbs may generally be procured by the end of the month. As soon as possible, a number of them should be potted in small pots, using a soil of sandy loam, and placing the pots under a north or east wall. They should be covered with about six inches of sifted coal ashes; there they must remain till the pots are filled with roots, when they may be removed as wanted to the forcing-house. The smallest pots should be used as being most convenient for decorative purposes, as well as occupying the least space at all times.

Forcing Plants.—Inspect all the plants intended for forcing, regularly allowing none to get out of shape or overgrown by weeds, keeping them comparatively thin, especially the herbaceous ones. Remove or shelter the woody ones intended for the two or three early batches, so that they receive no more water than is sufficient to keep their buds and branches plump.

Seedling Plants should be thinned, if growing too thickly: weed them, if weeds make their appearance amongst them; transplant them to where they are to bloom next year, if they be hardy biennials or perennials, and water them if the weather prove dry.

Crocuses may be planted for early blooming; and to produce a good effect they should always be placed in patches, and not singly.

Geraniums, which have been headed in, and stood out of doors for a while, may at the end of this month be brought in, and placed on the greenhouse shelves; from the time, however, that they are in, there must be plenty of air given, and the house should be clean and dry.

Greenhouse Plants.—Greenhouse plants in general, such as the Botany Bay plants, hovatas, acacias, and other miscellaneous subjects must now be placed in their winter quarters, but they must not be crowded. Plants want room, not merely room to grow, but room for a very free circulation of air. Plants get drawn as much from crowding as from anything, and cannot be healthy when they have insufficient room.

Mimulas—Very many kinds are quite hardy; still the finer varieties being all easily raised from cuttings may be propagated, and kept under glass for the winter.

Fuchsias.—Withhold liquid manure, as flower, and not growth, is wanted now; take up the most handsome by the end of the month.

Lobelias.—Many of these do well to take up, and they give a good effect to the greenhouse for some time after being lifted. The end of the month is the most proper season; when taken up, let the blank be as little seen as possible.

Cinerarias.—Shift such as require it, and excite the forwardest plants by placing them in a warm exposure, supplying them rather plentifully with moisture, and occasionally with manure water.

Camellias.—Keep the plants in an airy situation, and water very carefully, never allowing the ball of earth to become dry. Keep the foliage perfectly clean by washing with a sponge if necessary.

Begonias.—Dry off the roots as the bulbous sorts show symptoms of resting, and lessen the supply of water to the others, except such as may be growing freely.

Stocks.—Pot off the young plants, and put them in a frame; too many of the good sorts can hardly be obtained.

Rue is a medical plant, propagated in spring by seed slips, or cuttings. It stands many years, but should be prevented seeding, and pruned down occasionally to keep it in a neat bushy trim of moderate height and strong growth.

FRUIT GARDEN.

FIRST WEEK IN SEPTEMBER.

PREPARE the ground where new plantations of fruit trees are to be made. Many fruit-trees of the earlier sorts will have their wood sufficiently ripened in the course of this month to admit of their being transplanted. One advantage will be gained by early autumn planting, which is, that the roots will, if supplied with plenty of water and puddled, soon push out fresh fibres, and be so far established before winter that their change will not be much observed in the spring. This is a good season for removing the earlier sorts of peaches, and other stone-fruits, and if carefully done, a crop of them may be expected the ensuing spring.

STRAWBERRIES. — Now let the spaces between the rows of strawberries be dug, and if necessary also manured. The common way of doing this is to *rut* off the rows from the intervals, and to dig them without singling the plants in the row. If the plants be old, and have never been dressed in summer, it is, no doubt, a very difficult thing to single them out properly. But strawberries should always be dressed twice a year, and each plant should be kept distinct. It is not hereby meant that the spaces between the plants in the row are to be deeply dug, but only pointed, or stirred up with the hoe, the manure being buried in the intervals. The surface may be left rough, in order that the weather may act the better upon it. This work may be done at convenience.

APRICOTS.—The trees will now be clear of fruit, and this will be a favourable opportunity to give a last assistance to the thorough ripening of the wood, by thinning out the superfluous shoots, decayed leaves, &c. Syringe the trees if the red spider has made any progress.

APPLES.—See that every kind be gathered at the proper season. The devourers and destroyers of fruit are at this time innumerable. The birds peck at what they please, they taste and leave, and taste again of others, and what they wound multitudes of lesser creatures follow to destroy. The least fly will attack the largest fruit when these have broken the skin. They attack the ripe fruit most, and therefore the best way of guarding against them, is by gathering what is ready for use, and most in danger.

CHERRIES.—The Morella cherries must be kept netted, to protect them from birds, and should always be gathered when quite dry.

PEARS.—This is one of the most valuable of our dessert fruits; pay the utmost attention to it, and gather all the finer and keeping sorts by the hand separately. There are some pears, such as the jargonelle, bergamot, &c., that should be eaten from the tree, or within a few days after they are pulled. They should never be allowed to drop, and they lose much of their flavour by keeping. The other kinds of pears and apples, in general, should not be pulled till their seeds are of a dark brown, or black colour.

CURRANTS.—If these have been carefully covered or matted up, it is probable that pretty good fruit will now be secured, but it must not be expected to be equal to what it was in its proper season. As soon as the bushes are cleared, remove the coverings, and dress the ground about them.

FIGS.—The utmost tenderness must be exercised in handling this fruit; have the finer ones covered with gauze if the wasps be numerous.

GOOSEBERRIES.—As the bushes are cleared take off all the coverings, and get the wood well ripened before winter.

NECTARINES.—Attend to the perfecting of the wood by giving it all the sun, air, and light possible; look over the trees when clear of fruit, taking away such shoots as can be spared.

PEACHES.—Let the ripe fruit be carefully looked to; syringe the trees when the crop is cleared if they be infested, but not otherwise; thin the wood and decayed leaves to the utmost, and get the wood, if possible, red and hard, ripe for next season.

PLUMS.—These may be kept for a considerable time in a cool place. Those from the walls require to be looked over frequently.

MELONS.—Attend to the ripening off of the late fruit by withholding water, and keeping the lights closed to get as much heat as possible. After this month melons are of little value.

SECOND WEEK IN SEPTEMBER.

VINES.—The vines should now be gone over for the last time, taking off all trailing branches which have been lately produced, and fastening such branches as are loose in their proper places. The ground should be kept clear from weeds.

BUDDED FRUIT-TREES. — Untie the buds of the fruit-trees that were grafted last month, otherwise these bandages will confine the bark of the stocks, and prevent them growing equally in the part where the bud is put. Care must also be taken to clear the lower part of your stocks from shoots, and let not the ground grow hard about the roots of the trees.

PLANTING FRUIT TREES.—All sorts of fruit-trees may now be planted if the weather be fine, and the ground tolerably dry. It is, however, not advisable to plant in heavy wet lands at this season; for spring planting will, in such cases, be attended with more success.

TRANSPLANTING FRUIT-TREES.—About the middle of this month prepare the ground where new plantations of fruit-trees are to be made. Many fruit-trees of the earlier sorts will have their wood sufficiently ripened by the middle or latter end of the month to admit of their being transplanted. One advantage will be gained by early autumn planting; the roots will, if supplied with plenty of water, be so far established before winter that they will succeed as well as if planted later in the season.

PRUNING SMALL FRUITS. — Such plants as gooseberries, currants, and raspberries should now be pruned, if there be leisure time; however, any time until the end of February will do equally well; nevertheless, the greater the amount of work which is done at this time the less will remain to be performed in the spring, which is the busiest time with the gardener.

CURRANTS. — Those which were matted up for preserving should be exposed and cleaned in five days, taking care to put the covering on again. Clear the trees of all vermin, particularly caterpillars, which abound at this season of the year, and frequently prove the total destruction of the trees.

DIGGING THE GROUND BETWEEN CURRANTS AND GOOSEBERRIES. — The borders and quarters amongst these plants may be dug as soon as convenient after the crops are gathered, and if the ground be scarce, a little spinach or turnips may be sown, or coleworts may be planted amongst them; but otherwise let the ground be laid up in a rough manner, that the weather may act the better on its surface.

THIRD WEEK IN SEPTEMBER.

GATHERING FRUIT.—Continue carefully to gather fruit. Never gather them but in perfection: this is to be known by their colour and surface. The vulgar have a way of trying the ripeness by pinching them, but this is a very ungardener-like method, and is not necessary. When plums are ripe their colour is bright and fine, and the mealy powder lies full and yet light upon them. The way to gather them is to touch them very lightly, so as not to rub off the bloom; having ever so little hold, the smallest twist takes them from the stalk; never give them a second, if the first does not loosen them, for, in that case, they are not ripe enough, and should be left on a day or two longer. The same rule holds good for the peach. To know whether grapes are fit to gather, observe their skin and colour. When they are ripe, they are clear and transparent, and they are never so till then. This is an unerring rule. Regard must be paid to the greater number of grapes upon the bunch, for they never all ripen together. When the larger part are transparent, let the whole be gathered, and let the unripe ones be taken off, as also any damaged berries. Pears require a different management, for they should always be gathered three or four days before they are ripe. They will ripen very well in lying, and if they be left all the time upon the trees they grow mealy.

STRAWBERRIES now claim particular attention. The following will be found good practice for the formation of a strawberry-bed. Trench the ground twenty inches, lay three inches of fresh stable manure at the bottom, introduce over that plenty of generous loamy turf, not clayey, and fill up with good soil; let the beds settle, and then plant the best rooted runners—the first from the mother stock of approved fertility in rows two or three asunder, the individual plants at the same distance from each other. If single rows be preferred, observe the same rules, and be careful to preserve the distances. We believe that finer fruit, and much more of it, may be so obtained.

CURRANTS.—Those which are to be preserved must be kept matted perfectly close, for if the least aperture be allowed, the birds will enter and injure them.

GOOSEBERRY AND CURRANT TREES.—Propagate gooseberry and currant trees by cuttings, and if some hearty showers fall, it will be an advantage. The common method of raising these is by suckers, but they do not grow well this way, without a deal of trouble. Take the cuttings from the bearing branches of some very thriving trees, and let them be ten inches long; dig up a bed for them, and let them be carefully planted four inches deep. Let the earth be well settled to them, and give them a gentle watering, repeating it occasionally, if there be not showers. Shade and defend them from cold winds, and they will take root before the frosts set in, and establish themselves during the winter, so that in the succeeding spring they will shoot with strength and vigour.

Cherries.—The Morellas must be protected from birds, &c. Syringe the trees of the early sorts with clear water in which soot and wood ashes have been steeped.

Wall and Espalier Trees.—The season for pruning and training such trees is now nearly over, and the winter pruning will soon commence. Those trees which have been disburdened of their fruit should now be gone over with a light birch broom, or straight switch, or cane, and all the ripe or decaying leaves brushed of. This will greatly forward the ripening of the wood, and the maturation of the blossom buds for next year. It should be cautiously performed, never brushing much at a time. The shoots from which the leaves are to be displaced, should be gently stroked upwards and outwards, but never the reverse way of the buds for fear of injuring them. Standard trees exposed to the wind seldom require this care, but as the wind has not the same power on wall and espalier trees, it becomes essentially necessary.

Figs.—The utmost tenderness must be exercised in handling this fruit Leave the lower ones covered with gauze if the wasps be numerous.

General Directions.—The final gathering of the fruit, and the thorough ripening of the wood, pruning, nailing and cleaning, are points which must be attended to, together with a suitable provision of soils for transplanting, &c.

FOURTH WEEK IN SEPTEMBER.

Late Melons.—The plants from the seeds sown in July will now require a little fire heat, in order to further the progress of the late fruit, and to dry off damps. Let the fires be made very moderate at first, however, and increase their strength as the season becomes more cold and wet. Very little water will now suffice for the plants, as their roots will be fully established, and be spread over the whole bed, the heat of which will now also have subsided. They should therefore only have a little water once in eight or ten days.

Wall Trees.—These will require to be gone over again in order to remove any young growths lately produced, to tie up loose branches, or the points of lengthening shoots. Vines part cularly will need frequen regulation to keep them neat and orderly, and now is a good season to stop many of the shoots expected to be fruitful next year. The effect intended by this is to plump the lower buds, and induce the development of flowers; where the fruit is too much shaded by the leaves, a few of these last should be plucked off.

Filberts should now be gathered in dry weather, and stored away for keeping.

Nectarines and Peaches.—These fruits will now be very much exposed to vermin, particularly ants and earwigs. Numerous remedies have been prescribed in the pages of this journal for their destruction, to which we must refer those who are annoyed by them. The fruit should be picked daily as it ripens. If they be growing on flued walls, a little fire may be applied in the daytime to ripen the wood.

Gooseberries.—As the fruit is gathered from the trees that have been matted up, be careful to cover them up again as soon as the fruit is gathered. The same directions will apply to currants.

Young Fruit Trees in the Nursery.—Particular attention should now be paid to the young fruit trees in the nursery, to have them thoroughly clear from weeds whilst the dry weather continues.

Stocks to Graft or Bud on.—Prepare a nursery of fruit tree stocks for grafting and budding, either those raised from seed in spring, or from cuttings, layers, or suckers.

KITCHEN GARDEN.

FIRST WEEK IN SEPTEMBER.

Asparagus.—Cut off all decaying shoots, which will assist the ripening of those that remain; keep them free from weeds, &c.

Brocoli.—Make the last planting for the season. It may be useful hereafter, and may be planted thinly about the end of next month. It is a common practice to check their luxuriant growth by transplanting them, but this mode is questionable.

Cabbages.-Cabbage plants may be planted out now in any spare quarters, as close as five or six inches from each other in the row, and the rows need only be wide enough apart to walk between them, for the purpose of hoeing them up and clearing away the weeds, fifteen to eighteen inches. In the winter, every other one might be drawn to eat as greens, giving the rest more room to grow. The young cabbage plants which were sown the first or second week in August should be pricked into nursery beds, some of the forwardest the first week in the month, and the rest in the middle or latter end of the month.

Capsicums.—These must be neatly and closely nailed to the walls, in order that they may ripen, which they will do if they have been at all well managed.

Carrots.—If there be no convenient place to store them, and the ground be not required, allow them to remain in the bed till the frosts set in.

Cauliflowers.— Sow again, and those ready to prick out should be transplanted either in frames or in a very favourable situation out of doors. Those few which may be wanted very early should be put into single pots from which they can be removed into larger ones. Keep them all from growing up weak and tender by removing the shading and giving plenty of air. In the common way of planting the hoe must be brought in among the cauliflowers, but the placing of them at such a distance that the spade may be brought in between them is much better. When they are hoed, let a small strong hoe be used to break the surface to some depth, and when the weeds cut up by this are drawn off the ground, let a copious watering be applied.

Celery.—Plant more celery the beginning of this month for a successional winter crop, and about the middle or latter end, plant out a number for a late winter crop and spring supplies. Earth up the crops of celery which are planted in trenches as they advance in growth, that they may be blanched of a proper length. The first crop will now be considerably advanced, and should be earthed up.

Coleworts.—The first week in this month some of the forwardest cabbage colewort plants which were sown in the latter end of July and August should be planted into the places where they are to remain both for autumn and winter, and early spring service, and in the middle or latter end of the month plant out the rest for a general spring crop.

Endive.—Plant out for a late crop a little of the endive sown in August, as soon as it is fit. This should be planted on a warm border, or in a sheltered situation, in light soil, that it may have a chance to stand over winter. Attend to the advancing crops as directed last month.

Garlic.—If much in demand it will be well to make a planting now.

Kidney Beans.—Protect the late crops from cold at night by hooping them over, and covering with mats.

Lettuce.—Lettuce may still be sown, but the sooner now the better.

Mushrooms.—The mushroom house must now be kept moist, and at night a little fire may be beneficial; keep the beds in a working state by throwing over them a little close litter. Collect perpetually the droppings of horses, and have this well prepared, so that boxes, shelves, or beds may be made up at any time.

Onions.—The full crop of onions may now be taken up. Spread them thinly on the ground, but if the weather be wet, they had better be removed to a gravel walk, or a place purposely covered with sand or gravel, in the full sun. Turn them over once or twice a day, until they have become thoroughly dry, and then store them in a well-aired loft, or other dry, convenient place. Here still turn them occasionally if they be thick; or they may be strung up by the tails, or hung in nets. If they be not intended to be strung, the tails and outer husks should be displaced before housing them; and the latter at all events, that is, just as much as comes easily of in rubbing.

Parsley to come in early next spring may be sown the beginning of this month. But where there is plenty sown in spring, a store may better be provided, by reserving a quantity from this time uncut.

Parsnips.—The present month is still favourable for sowing parsnips. One half-ounce of seed will suffice for a hundred square feet.

Peas.—Use the utmost care when gathering from the late crops not to break the stems; hoe and keep the ground fresh about them. It will be necessary to protect them from birds, &c., by netting, or similar means.

Radish.—About the beginning of this month sow a full crop of red and white queen radish, and also some black Spanish. They will stand over winter, and be very acceptable in spring. They may be either sown in shallow drills, thinly, at nine inches apart, or may be sown broadcast. Choose a dry, open exposure.

Small Salading.—Let the different kinds of small salading be sown once a week or fortnight, as may be deemed necessary. They may now be sown in any free situation, where the earth is light and rich. About the middle or end of this month, begin to sow these seeds on a warm border, under a south wall, or other fence of the same aspect.

Spinach.—Spinach for spring use may be sown the beginning of this month. With it may be sown a little lettuce. Hoe and weed the rising crops, as they may require it, and according to the manner in which they have been sown. If the seeds have risen very thickly, the plants may be thinned out, reserving, however, the final thinning till February.

Turnips.—Now finally thin out the crops of winter turnips, and hoe the ground amongst them. Let the broadcast crops be thinned to eight or ten inches square, and those drilled to five or six in the lines. Yellow turnips may still be sown, and if done at the beginning, or about the middle of the month, will succeed pretty well.

SECOND WEEK IN SEPTEMBER.

Asparagus.—The asparagus beds should now have a good dressing, all weeds should be cleared away, and the alleys between the beds will be a very suitable place for some colewort plants.

Brocoli at this time requires particular care. Frosts are to be expected soon, and therefore the middle of this month is the season for the last transplantation. Break the earth between the plants to the depth of five inches, and draw a good deal of it about their stalks.

Cabbages.—Weeds will now be appearing amongst the late sown cabbages, and care must be taken to destroy them as soon as they rise. Nature follows the gardener's hand in every step, and sows weeds wherever he puts in the seeds of his crops. These grow faster than the useful herbage, and they must be pulled up, or they will rob it of its proper nourishment, and choke every plant. Plants may still be set out at the regular distances, in a good piece of mellow ground, where they are to stand till they be removed to the places in which they are to remain.

Cauliflowers for a late crop will be in need of water, and on the contrary, there is nothing from which the young plants meant for the coming season will suffer so much damage. At the present season the rains begin to be chilly; they have the injurious effect of rotting the stems of these tender plants, and that is an injury from which they never recover. The young plants must, therefore, be sheltered from those showers which will be so beneficial to the others. The early crops of cauliflowers will now be beginning to get a-head; they must be defended from sun and rain, but still they must enjoy freedom of air.

Celery.—Earth up in dry weather, and when water is required it will be advantageous to give them liquid manure. Young plants may still be planted in a slight drill, although they will only grow enough for soups. This young stuff must have the benefit of rich earth, and the safest way to scrape the growth would be to dig in some rotten dung along the line before it is planted. The drill must be very light, for it cannot grow much.

Coleworts. — The beds of coleworts which were planted out last month should be carefully weeded, and if the plants be too thick, some of them should be drawn out, and transplanted into another spot, in order that those which remain may have room to grow.

Endive.—The endive which was sown in August may now be planted out for a late crop. The situation in which they are planted should be shaded, and the soil of a rich and light nature. Should severe frost come on, they will require a little protection, when there is every chance of their standing the winter. Attend to the directions given in the preceding remarks.

Lettuces.—Some common cabbage lettuces, or some brown Dutch lettuces may still be sown to stand the winter in warm borders without covering. Some cos and Silesia lettuces may also be sown on warm borders near walls, pales, or hedges. Those which were sown in August may now be transplanted to supply the kitchen in autumn.

Onions.—The full crops of onions must now be secured in a dry, airy place. On the first opportunity presented by a wet day or so, it is well to have them thoroughly cleaned, handling them gently, and laying them thinly over the floor; if they have been laid by in a dirty state they must be turned regularly. Lose no time in sowing the winter crop, if not already done; the ground must be well prepared by deep digging and rich manuring, and sow thickly so as to have enough and to spare for salads, &c.

Parsley.—Attend to thinning, hoeing, and cleaning; it is well to have a good deal transplanted.

Potatoes that are ripe must be taken up and preserved in appropriate places, where neither wet, frost, nor heat can reach them. The large growers dig a pit a foot deep, in which they heap the potatoes, then top them with six inches of straw, and then cover them with as much thickness of mould.

Salads should be treated all the year alike, or nearly so; but plenty should be sown in frames where a winter's supply is required, all the sorts of lettuces, and small salads, as wanted; radishes also. Onions for drawing very small may be sown amongst the lettuces, to guard against the destruction of the out-of-door crops. Lettuces may be planted out in warm protected borders. Endive and lettuces may be blanched by being tied up with bass matting, and that which has grown enough may be pulled, and kept in mould in a shed or outhouse, or covered with kale pots out of doors, for it will preserve them in the hardest winter.

Spinach.—Thin out the plants to nine inches apart; this is kept in a long time by gathering only the outside leaves, and suffering the others to grow, consequently it must have room to spread itself, and be always kept clear from weeds.

Tomatoes.—Keep them from growing now, and concentrate the strength of the plants in the fruit. Have them neatly nailed, and exposed as much as possible to the sun, by thinning the branches.

THIRD WEEK IN SEPTEMBER.

Brocoli.—If the weather be seasonable brocoli may still be planted. Draw the earth to the stems of those that have been planted some time.

Cabbages.—Set out cabbages at the proper distance in a good piece of mellow ground, where they are to stand till they are removed to those places in which they are to remain. Some plant them out upon decayed hotbeds that have served for raising cucumbers and melons. The bringing these plants forward at this season is a very important part of the business of the gardener, but it cannot be well done without a better heat than is to be obtained from exhausted materials.

Cardoons.—Earth up cardoons with care. This is a piece of gardening little understood, and, consequently, ill practised. The weight and temper of the earth about the stalks are the two great points on which all depends, but this temper or degree of moisture can never be obtained without a due fineness of the soil, nor can there be the necessary weight, unless it have some firmness. The proper soil is a mixture of ten bushels of garden mould, one bushel of large sand, and three pecks of burnt or calcined clay. The clay for this purpose is to be burnt gently till it crumbles away. It is a practice well known in husbandry, and should for this use be brought into gardens. This mixture should lie together for a week, turning it frequently, and then be brought to the ground. The leaves of the cardoons must be tied up with a rope of bass or old matting. The compost must then be laid up to them, a foot or more in height, and afterwards raised higher occasionally; care must be taken not to bury the hearts of the plants; the earth must be dry when it is put to them. It will cling close without clogging, and will bring them to perfect tenderness and a fine flavour. If cardoons were usually raised with this judgment, there would be more regard shown to them than there is at present.

Carrots.—Sow in a warm spot, and towards the end of the month a slight hotbed may be made for another sowing, but this is seldom necessary; go over the more early sowings, and remove all the seed weeds.

Cauliflowers.—Let a fresh hotbed be made, with good dung that has lain to evaporate the most violent part of its heat, and let it be covered nine inches deep with the finest mould; upon this draw lines four inches asunder, and at every three inches make an opening; into each of these openings put one plant, and set it carefully upright, with the mould closed well to the stalk; give a gentle watering to the whole bed, and repeat it as occasion requires. In the bed they are to remain three weeks, and then to be planted out into beds where they can be defended by glasses, and stand the winter.

Celery.—Earth up slightly all except the latest crops; do not bank them up too much; a small proportion only should be fully earthed up, in order to keep a supply in succession; it must be done when they are quite dry. When water is required, it will be advantageous to give them liquid manure. It is not too late to make another small planting to be used in spring.

Coleworts.—Transplant coleworts where they are to stand till spring. The ground should be well dug for them, or they will make little progress during the winter.

Chervil.—A little may still be sown for standing over winter by being covered. It will, however, stand the winter well, if not very severe.

Endive.—Plant a few more out where they can receive slight protection in winter. Choose a dry day to tie up, or cover up a few of the best for blanching, which must be attended to from time to time, so as to keep a succession fit for use. Some persons transplant numbers into a dry warm border for winter use, but plants sown in August and thinned to foot distances do well without transplanting.

Herbs.—Almost all the sorts may be increased now either by division of the roots or by seeds. Tie up the parts gathered for winter use in small bundles; hang them in a dry place. Some use an oven for drying, and gather off the leaves and keep them in tin canisters, which is an excellent plan, and preserves the aroma of the herb.

Lettuces.—The hardy brown cos is the best, and even the middle of the month is late enough for sowing the seed, unless it be in frames of good cucumber earth, where the plant can be protected by glasses or oiled paper frames during cold weather. By transplantation, however, from the seed beds, a stock of winter lettuce can be obtained.

Onions.—It is to be supposed that the full crop of onions has been secured, for after the middle or the end of the month they will advance little in their growth. On taking them up, they must be spread thinly on the ground, and be turned over regularly once or twice a day, until they be thoroughly dried, and then stored away in a well-aired loft or store-room ; as soon as the crop is removed, the beds should be well dug and ridged.

Parsley.—It is scarcely advisable to sow any more this season, but the early crops, or part of them, will be made more useful by being cut over, and made to spring anew: that which is cut off may be dried in the sun or in an oven, and preserved in a glass bottle or tin can for winter use.

Potatoes.—More than usual care should be bestowed on this crop before they are stored; see that they be well dried, and all diseased ones picked out: probably it is well, if the weather be dry, to lift them early if they be approaching ripeness. Where it is practicable, have the potato house free from drip, well ventilated, and with plenty of room, so as to prevent the necessity of laying them in large heaps ; it is advantageous to turn them frequently.

Radishes must be sown on a slight hotbed, and require plenty of air.

Seeds.—Seeds of all kinds intended to be sown should be gathered as they ripen, and placed in security where it is dry. Most seeds are the better for remaining in the pod till they are required for sowing.

Salad.—Nearly all the small sorts will still require to be sown every ten days, or so ; a warm, airy border should be devoted to this purpose.

Spinach must be thinned as it comes up ; no plant ought to stand nearer to its neighbour than from six to eight inches. Some take off the leaves as they grow, and not, as in the summer kinds, use the whole plant at once ; the large or outside leaves are picked for use, and the plant will then continue to supply the table during the whole of the winter. It is, however, necessary to give it plenty of room, so that when it is ripe, it must be thinned out to the distance mentioned, and constantly be kept clear of weeds.

Tomatoes.—Cut away most of the young shoots so as to expose the fruit to the sun, and cut away also all very late fruit ; ripen off the early ones by laying them in the stove or greenhouse, or in a close frame.

Turnips may yet be sown in a very warm place, but do not depend much upon them ; attend to the thinning and hoeing of the earlier sowings ; those that are too late for bulbing may be worth attention for their tops.

Watercress.—New beds may now be formed and planted at six inches apart. The old established beds should be dried off and cleaned, and all blanks filled up with vigorous young plants.

General Directions.—All vacant pieces of ground should now be either trenched or dug deep, leaving the surface as rough as possible, or thrown up in long, narrow ridges, so that the frost may penetrate through it. This operation of winter fallowing, either by trenching, digging, or ridging, is of infinitely more importance to garden ground than all the manures that can be given it without. Clear away all decayed leaves, and dig them into the ground, or carry them to the compost yard for vegetable mould. If a garden be thus laid up in fallow, it will have a neat and orderly appearance the whole of the winter, and will be contemplated with more pleasure by its owner than if left in that state of neglect and confusion in which we generally see kitchen gardens at this season. Suffer no weeds to run to seed, and allow no crop to suffer for want of thinning, hoeing, or watering. Earth up all advancing crops, when dry.

FOURTH WEEK IN SEPTEMBER.

Asparagus.—Dress your asparagus beds. Cut off the old stalks, and lay them by in heaps, and clear away the weeds with them. When the beds are cleared, let the surface be stirred with a hoe and rake, and spread over it a moderate covering of the dung from one or more of the summer cucumber beds. Then pare the alleys between the beds, and break the earth that is taken off fine, strew this over them upon the old dung, and give all a gentle watering. The beds being thus taken care of, some use may be made of the alleys. Let the heaps of weeds be dug in, and well covered, and these will serve as a manure. The alleys lying low between the beds will be a fine sheltered spot for some colewort plants ; these will be very secure, and being planted at three feet distant in a single row in each alley, they will have abundant nourishment, without doing the asparagus any harm ; they will stand those winters which destroy the common crops, and they may be taken away before the time of the spring dressing of the beds.

Continued on page 274.)

THE NECTARINE.—*See p. 276.*

THE ERICA, OR HEATH.—*See p.* 277.

KITCHEN GARDEN.

CONTINUED.

BEANS.—Let a piece of ground be well chosen for a crop of beans and peas. It must be defended from cold, and open to the south sun; dig into this some sand and coal-ashes, and then plant it half with beans, and sow the other half with peas. If these stand the winter, they will come in at a fine season, and they will be the more likely to do it, on account of this practice of digging in the dry and warm ingredients.

BROCOLI will now be in a promising condition, and due care being taken of it, there will be after this little danger. In order to protect it from frosts, and at the same time increase its vigour, break the earth between the plants to the depth of five inches, and draw a good deal of it about the stalks; choose a good day for this, when the earth is dry, and pile it up to a due height without damage. If the heart of the plant be covered it is damaged, if not destroyed.

CABBAGES.—At the close of this month prick out a number of those sown in July or August. Choose a dry, lightish spot of ground, and divide it into four-foot beds, with twelve inch alleys between them. Point over the surface, and break it fine; then prick them in at three inches apart, and settle all with a little water. Observe to plant each sort separately, and do not plant too deep. At the same time may be planted out in a warm border, or other well-exposed spot of good soil, being well dug and manured, a number for good, which, if they weather the winter (and that they will do, if not very severe indeed), will come in very early and acceptably in spring. In order to have the better chance of obtaining a crop, and also a succession of spring greens, they may be planted at fifteen inches between the rows, and at eight or nine inches in a line. In March or April, every second in the lines may be cut out for use, and the others will then have sufficient room to come to full size. There is another very good and simple method of obtaining spring cabbages, which is to let the roots and stems of a number of the spring or early summer planted ones remain in the ground. At this time clear them from leaves and other rubbish, and point over the ground, burying in a little compost about their roots, if the soil be poor. If the winter be open, there will be a constant supply, and if not, a crop of fine-hearted cabbages will come in about February and March, very delicate and acceptable. The best sorts to dress for this purpose are the early dwarf, or early York.

CAULIFLOWERS.—Now prick out a number of the plants sown in August, under a wall or hedge, in light, rich earth. Point up and form a border for them close under the wall, at twenty inches or two feet broad, and prick them in at three inches apart.

CELERY.—Celery should now be earthed up, as it makes advances in height, in order that the plants may be well-blanched a due length before severe frosts attack them. Take advantage of dry days, and earth them up on both sides of each row. Let the earth be well broken, and lay it up to the plants with care not to break the leaves or bury the hearts of them.

ENDIVE.—Continue every week to tie up some full-grown endive plants for blanching. Choose a dry day to do this, observing always to make choice for this purpose of plants nearly full-grown. Let the leaves be gathered up regularly and close in the head, and then with a piece of strong bass tie them neatly together. Some people blanch or whiten endive by laying boards or tiles flatways on the plants; the plant will whiten tolerably by this method, but not so effectively and full in growth as those whose leaves are tied together as above directed.

LETTUCE.—The lettuce plants which were sown the end of August to stand in the open air all winter for next spring and early summer supply, should now be transplanted in beds of rich light earth, in a shallow situation, six inches asunder; they will supply the table before and after Christmas.

ONIONS.—The winter crops sown in August will now be well up, and should be daily cleared from weeds. If cleaned about the end of the month, perhaps they may not require weeding again this season, but that must depend on the state of the ground, and if need be, go over them a second time.

SALADS.—Small salading may still be sown, but the sooner the better, that they may get a little established before the frost sets in.

GENERAL DIRECTIONS.—This month brings its work in the kitchen, as well as the flower and fruit garden. There is much to gather as well as to plant, and there is hardly a busier month in a well kept garden, although none of the great operations are undertaken till October. In the first place, there are many crops to clear off the ground, for if there be any vermin, particularly the wire-worm, they will attack the tubers. Peas, beans, cauliflowers, cabbages, and sundry other matters are cleared off one after the other, and the ground should not be allowed to remain idle. Dress the ground where it s required, and dig or trench it for the various crops that are to succeed them.

THE APPLE APHIS.

The author of a "Natural History of Godalming," thus describes a curious colony of aphides which he discovered in an apple without any perceptible mode of entrance:— "I have cut open codling after codling, and found the pips garrisoned with aphides; not one lone aphis, but a whole troop, of all sizes. When I let in the daylight there was a considerable sprawling and waving of legs, and no small alarm in the hive, but by degrees they got used to light and fresh air and were quite still. I tried to tickle them with a straw, in order again to watch their movements, when, lo and behold, they were all dead—gathered to their fathers—gone to the tomb of all the Capulets! Some had heaved anchor and dropped from the pips; others, fixed more firmly, had died at their post, and tucking their legs together under them, hung by their beak. In no apple was there any road in or out; there was no chance of passing to the outer air, or of their having come from it; indeed, their speedy death proved that change of air did not agree with them. I was particularly careful in my search for a *via*, but there was none. I have often seen the same thing in a bloated poplar leaf; but here is a possibility of the egg being laid between the cuticles of the leaf, then the sap sucking commencing, the bloat may be caused, but this is impossible in a huge apple with an inch and a half of pulp in every direction. I am unable to explain the mystery; so, like many wiseacres, I content myself with wondering how in the name of fortune the aphides got there!"

CULTIVATION OF THE ROSE.

Mr. Francis gives the following as the result of his experinence in the cultivation of roses:—"In cultivating roses," he says, "nothing delights in rich soil more than this handsome flower. They should always be planted in a composition of stiff loam, rotten dung, or leaf mould. Where roses have grown strong for three or four years standing, they may be taken up, while the ground is being well renewed, as well as their shoots very much thinned, and then planted in the same situation—they will then produce as fine blooms as when first transplanted from the nursery. This should always be done in the early part of November. Roses bloom well the first year after being transplanted, if carefully attended to. They should, when transplanted, have a strong stake attached to each standard, to preserve them from the wind moving them, and then well mulched round. If dry weather the ensuing spring and summer, they should be occasionally watered with liquid manure. In pruning roses, much requires to be observed. With the exception of teas and Chinas, December and January are considered the best months for pruning; many sorts, such as the hybrid Chinas, hybrid Bourbons, with some of the strongest growing Noisettes and Bourbons, require very little pruning; about every third year they should be pruned in close, so as to make them produce new wood, and to prevent the plants getting too old and ugly in appearance. The Persian yellow requires merely to have just the top of the shoots taken off, it being found to flower only on the last year's wood. Another excellent plan for standard hybrid Chinas, many of the pillar roses, and standard climbers, is to prune them in pretty close just after they have done flowering. They will then produce new shoots the same summer, and flower abundantly the next season. February and March are considered the best months for pruning teas and Chinas. In protecting roses, some past severe winters have fully proved the necessity for protecting all the tea kinds, with many of the Chinas, such as Sulphurea superba, Infidelities de Lisette, Alexina, &c. Very few young plants have survived except when protected. Dry litter or short dung should be laid round the plant, while branches of fir or fern shoud be stuck round, to break the severity of frost."

CULTIVATION OF BALSAMS.

There are few plants that will more amply repay the trouble and attention bestowed upon their cultivation than the balsam. The many beautiful varieties that have lately been originated, of almost every shade of colour, and the simple treatment required in raising them, render it well worthy the attention of every cultivator of flowers, particularly those who, like myself, have taken advantage of the reduction in the price of glass, and have a pit or small greenhouse at command. It may be grown in its greatest perfection in the greenhouse; but it may also be grown with abundant success in the open air. The method of treatment is as follows:—The soil should be composed of about one-half willow dust (that is, the decomposed vegetable matter that may be found in the stumps of old willow trees), and the other half some of the contents of an old cucumber bed, well mixed together, and run through a coarse sieve. The time of sowing is from the middle of March to the middle of April. As soon as they are sown, the pots should be plunged into bottom heat, and the plants will appear in about six or eight days. When they get into the rough leaf, they should be transplanted into sixty-sized pots, and then regularly shifted into larger pots, till they get into peck pots, when they will attain an immense size. All the blooms should be pulled off until the plants have attained their full growth. Care must be taken that they have a regular supply of water. The best time for watering is early in the morning; and if, during hot weather, a few pansful of water are thrown on the outside of the glass about the middle of the day, it will render the atmosphere in the inside cool and pleasant. Those who wish to try them in the open air may pursue the same plan as for the greenhouse, until the plants get into quart pots. About the latter end of May, a bed should be prepared of good soil, mixed with rotten dung, and dug a good depth, when the plants may be turned out of the pots and planted about a yard asunder. If a little taste is displayed in arranging the colours, a most splendid effect will be produced, as they continue flowering until cut off by the frost, which seldom takes place till October.—*Correspondent.*

HINTS TO GERANIUM GROWERS.

1. ALWAYS select plants for seedling of a handsome growth that bear flowers of a large size and handsome form.

2. Remove the anthers as soon as possible, so as to prevent the flower receiving its own farina.

3. When the stamen opens, and the five points bend well back, it is ready to take the farina; if applied earlier than this period, many shy sorts will not form seed. The best time for seed is early in the morning.

4. Avoid using the farina of a small flowering plant, unless to obtain a particular colour, as the seedling in that case is sure to bear small blooms. Never use the farina of an inferior variety.

COLOUR.—The seedling generally assumes the colour of the male plant. The farina of a crimson flower, shed on a white ground, will often produce a rose colour, but where the colour of the female is somewhat similar to the male, a similar and often a brighter shade than that of either parent is obtained. The blotch or eye is most frequently got where either plant has it, but it is much improved in richness of colour and size where both possess it. It is difficult to obtain a scarlet bloom of large size, though in some instances the most decided success has attended some late experiments in regard to the size of the scarlet flower; it is, however, certain the nearer you approach either that shade, or orange, the smaller the flower proves.

It is often desirable to use the farina of a new variety; in order to save the appearance of the plant, employ a small pair of plyers, with a spring to keep them closed; with these remove a single anther, which will impregnate two or three blooms.

The seedlings ought to receive the name of the parent plant till flowered, as, by adopting this method, the grower can make observations, and arrive at tolerably correct conclusions with regard to colours and the spotting of the plant.

By the adoption of the above means, an unlimited variety may be obtained, many of which are sure to reward the amateur for his labour. For the sake of experiment, I raised fifty seedlings from one plant; no two were alike, and not one proved the same as the original. I had white, lilac, rose, light crimson, and dark crimson flowers.

This season I have raised five plants from Duenna, impregnated with Oliver Twist, to obtain the colour of Oliver with the blotch of Duenna. So far as I can judge from the foliage, the five will prove quite distinct sorts.—AN AMATEUR.

THE NECTARINE.

THE culture of the peach and the nectarine is so very similar in every one of its details, that to impart instructions for the cultivation of one is literally imparting it for the other. So similar, indeed, are the two fruits in their general nature and habits, that we have instances on record in which the nectarine and peach were growing on the same tree, as it were spontaneously, without the slightest interference of art, but as a positive and unaccountable freak of nature.

There are two seasons for the pruning of the nectarine (January and May), and we consider the latter as a very important branch of its management. The first process of summer pruning is termed budding, which means the rubbing off of all foresight shoots, as well as those produced from the back of the branches, or otherwise useless or ill-placed. The leading shoot of each branch, as it proceeds in growth, should be carefully fastened to the wall or espalier, as well as one, two, three, or at most four, of the best-formed and best-placed side shoots, to be in like manner secured to the wall, the number of these shoots depending on circumstances, of which the bulk, strength, and present state of the tree are to be considered. The lower down on the branch these young shoots are left the better; it is of little use to leave those of the top only.

Very robust and luxuriant shoots, which often proceed from the centre of the tree, should be cut close out, unless there should happen to be a vacant space near them to be filled up. The fewer of these, however, that are retained the better, for they seldom make good wood, and their excessive luxuriance cannot be borne by the mother tree without evident injury to the other parts of it.

At whatever season the operation of pruning is performed, whether in autumn, midwinter, or spring, as soon as the trees are pruned they should be *carefully* replaced on the wall, if it be not intended to retard the buds, by keeping them detached as long as is deemed necessary. In nailing them, observe to leave sufficient room in the shreds; it is a good rule to allow as much room as would admit another shoot of equal size along with that laid in, to allow plenty of room for the swelling of the shoots. In young luxuriant trees this is of the utmost importance, for when this precaution is not attended to, the shoot swells too fast, and not having sufficient room in the shred, is compressed on all sides, and often almost cut through; this produces a wound which, in most cases, ends in the death of the shoot. In driving the nails, care also should be taken to lay their heads in a position sloping from the shoot or branch, in order that they may not grow over them, and nails with the smallest heads should always be used, and no more used than is absolutely necessary to keep each branch in its proper place. Old nails should never be used unless they have been repointed; and if there be any apprehension of insects being either on the trees or in the wall, the nails should be cleaned before using, which may be readily done by boiling them in water alone, or in a mixture of soap, sulphur, and tobacco, but much better by putting them into an old iron pot and setting them on a fire until they become nearly red hot. The shreds once used should never be used again, for they are apt to contain the insects or their eggs, and as the expense is trifling, it is better to guard against such enemies than to combat them in any other way. In cutting the shreds, they should not be any broader nor longer than necessary for the sort of tree intended to be nailed, and each slip kept separate in the nailing, which will be found more convenient when they are to be used. Strong shoots of trees may be securely fastened to the wall with small pieces of tarred cord instead of shreds; it is stronger, more durable, and is not liable to harbour insects.

Nectarine-trees, and the same may be said of peach trees, previously to nailing, should be washed or anointed both for the destruction and prevention of insects. This is an important business, and should not be neglected; no time in the year is so well calculated for the operation as winter, when the leaves are off, and the trees disengaged from the wall for the convenience of pruning. Many preparations have been recommended for the purpose, although every gardener has his own approved composition, which he finds from experience answers his several purposes, either for the removal or prevention of his insect enemies; yet sulphur and tobacco seem to be the substances adopted and recommended by the majority of gardeners, with the addition of soap, probably for its adhesive property in making the others remain longer in the trees than they otherwise would.

THE ERICA, OR HEATH.

THE genus erica, consisting of the true heaths, is a most extensive and exceedingly beautiful one, and many of the species are of easy culture.

They may be readily grown as window flowers, as they do not require any artificial heat, but are only to be protected from severe frosts and cutting winds, the latter of which are very injurious to them. Cold, if not so low as freezing, does them no harm whatever, and thus by attention to the few directions we shall give, the culture of them is a very simple process; at the same time there is no genus of plants which gives so much beauty to the greenhouse or the window as well-chosen heaths.

The only circumstance which destroys these plants is allowing the mould to be always wet about them. The plan which we recommend to those who intend to grow them in windows, is to put round the outside of each pot an inch and a half thick of *sphagnum* or common bog moss, and if this be frequently moistened, it will prevent the necessity of giving too much water inside the pots. A little green moss should be placed over the top of each pot, and no water should be given till the moss be removed, and the mould examined, and then only when the mould appears very dry. If this be the case, the pots should be filled up with water, till the mould is wetted throughout, after which the green moss should be replaced.

In propagating the finer heaths, almost the whole of which are natives of the Cape of Good Hope, or the proximate parts of Southern Africa, are best multiplied by cuttings. The best plan to make sure that these cuttings will strike root, is to take them from off the half-ripened wood. They should be from an inch to one inch and a half in length, cut close at the lower extremity with a sharp knife; and all the lower leaves should be taken off. The mould in which to strike the cuttings should be peat, sand and leaf mould, but the greater part should be sand. The situation to strike them in should be cool, and rather moist, and where the sun can scarcely reach them, as this prevents both the necessity and the injury of their being shaded. When put in, the cuttings should be covered with hand-glasses for at least twelve months, and then the plants will be strong enough for putting into thumb pots singly. When this is done, they should be placed in a pit or frame, and frequently re-potted, so that they may never get stunted. As they grow, the tops should be taken off, in order to make them as bushy as possible, for if heaths once get tall and naked, they will never afterwards make fine plants. We need hardly add that the cuttings must be carefully protected from frost.

As the species amount to considerably more than five hundred, exclusive of varieties, an account of the whole would be rather a tedious matter; therefore we shall restrict ourselves to three, all of which are very handsome plants.

Erica *bowicana* is a handsome plant and a full flowerer. The flowers are white and ventricose, and they come out near the tops of the shoots in twos and threes together; and form a kind of whort round the shoot. The involucrum consists of two white leaves; the leaves of the calyx are oval, somewhat cordate and pointed. The calyx is composed of four parts, and the corolla consists of one piece, divided into four at the apex. The peduncle is half an inch long, and slender, and the flowers droop. This species when properly treated flowers from March to October, and it answers well as a window plant. It is a native of the Cape of Good Hope, and was introduced into this country in 1816.

Erica *aristata* is a beautiful and rather scarce species, and an abundant flowerer. The flowers are crimson, the leaves thick and fleshy, beautifully ciliated at the edges, and the apex of the leaf has a slender point, or awn, from which the specific name is derived. The flowers are ventricose, and come out near the top of the shoots, being almost capitate. It was introduced in 1801, and is also a native of the Cape of Good Hope.

Erica *tricolor superba* is a very handsome species, somewhat like *aristata*, but the leaves are broader and thinner, and the cilia of the leaves more slender. The ariata on the apex of the leaf is also longer, much more slender, and of a dark brown colour, somewhat waved. The calyx is composed of four leaves, rather broader at the base than the common leaves of the stem, but not otherwise easily distinguishable. The peduncles are short, so that the flowers stand upright; they are ventricose, and the apex is of three colours, red, orange, and green. It is a native of the Cape of Good Hope, and was introduced in 1836.

Compost for Auriculas.—Mr. Cotterill, one of the most celebrated growers of the auricula in the metropolitan district, has kindly favoured us with the receipe for a compost for auriculas, which he has used for twenty years with the greatest success. Take sugar scum, human manure, and flesh loam, equal parts; mix them well together, and let them remain for two years, carefully turning the compost every month. It should be kept in a dry situation, subject to as little moisture as possible. When prepared, Mr. Cotterill used to sell the compost at five shillings per peck.

Savory.—There is a summer and winter kind of savory, the former being annual and the latter perennial, and both are used as medicinal and culinary herbs, but the summer sort is that mostly cultivated for medicine; the annual is propagated from seed in March and April, sown thin and shallow, in drills eight or nine inches asunder. The perennial is sometimes propagated from seed, but more generally from rooted slips, or cuttings from the top in spring, as also from side slips. The annual sort should grow at six inches distance in the drills, and the perennial be allowed a foot. Summer savory, gathered for drying, is best drawn up by the roots.

THE CULTURE OF PHLOXES.

The phlox is one of the many fine plants we have received from North America. It is, however, in its native habitation an elegant weed, but with us it is deservedly raised to the rank and condition of a garden flower. The olden authors could not know it, for it is a native of no other part of the world but that which we have named, which was wholly unknown to them; but still it is somewhat strange that in later times it did not come more into the way of those who penetrated into that remote quarter of the world. It has been described by Ray in his supplement to the History of Plants, and he bestows the proper honour upon Mr. Krieg, from whom he received it, and who brought it from Maryland. He names it a lychnoides, and those who succeeded him have described several of the other species of phlox under the name lychnidea. It was Linnæus, however, who gave to the genus the name of phlox, which is derived from a Greek word, signifying a flame, but we know not what possible resemblance can be traced between the American weed and a flame; nevertheless, according to the true spirit of botanical science, it was necessary to give the flower some unintelligible name, and, therefore, it was considered that phlox would do as well as any other word in the Greek language. In our humble opinion, however, a flame and a flower have as much affinity with each other as a bullrush and an elephant.

The root is composed of innumerable fibres connected to a small head. The stalk is upright, firm, simple, and about two feet high, rounded somewhat on the surface, and elegantly spotted, from which the species now under our consideration derives its name. The two colours which form the variegations are red and green; when the plant is in its highest perfection, they are thrown together upon the stalk in irregular lines, spots, and blotches; when the plant is sickly or badly managed, they are then less elegantly disposed, and sometimes the colour is simply green, stained, as is common with the stalks of plants, with a little red at the bottom.

It flowers in July and August. The flowers are numerous, large, and beautiful, their colour varying from a pale and delicate red, to a violet or a purple; sometimes they are nearly white, and are disposed in a great irregular tuft, at the ends of the extremities of the stalks.

The spotted phlox, Phlox maculata, Linn., is a perennial, fibrous-rooted, and the culture consequently easy. It requires no particular defence against the climate of this country; it will thrive in common garden mould, and where it is once planted, it will remain as hardily as an undisturbed weed.

All that is necessary for its propagation is parting the roots in autumn, the abundant increase of which, if nothing more were required than adding to the number of the plants, would render all other care superfluous, but every tyro in floriculture knows that a hope for improvement exists wherever there are conspicuous flowers, and more especially when they have a natural tendency to variation.

As the flowers vary much in colour and in beauty, the finest ought to be marked, and cuttings taken from the plants.

Let a bed of fresh and rich mould be dug up for them in the nursery, and let them be watered regularly till they have taken root. The best season for planting them is the middle of May; they will be rooted towards the end of June, and they remain in their places till October; then let them be removed into their places in the borders, and let the ground be kept clear about them for a foot and a half every way; this promotes the spreading of their fibres, and on this depends the perfection of their flowers.

The colouring of the stalk is very apt to be lost when the roots are parted, but when cuttings are used, if care be taken to choose a painted stalk, the particular beauty is generally preserved in the plant raised from it, and the growth is always handsome.

Samphire is by some greatly esteemed as a pickle, using its leaves, which are sometimes added to salads, and occasionally used medicinally. It is perennial and propagated by parting its roots, or by seed sown in April. It is somewhat tender, likes a cool situation, but yet prefers a sandy or a gravelly soil. Let it have plenty of water. Some have found it to do best in pots, set for the morning sun only.

Rosemary.—There are several varieties, plain, silver, and striped. The plain is a useful medicinal herb, which should be found in every garden. It is propagated by suckers, layers, slips, or cuttings, in the spring, setting the two last where they have not much sun, and when rooted towards autumn, or in the following spring, allot the young plants a station rather warm and sheltered, as rosemary is apt to suffer or die in severe winters, especially the variegated.

PASSIFLORA (*kermesina*).

THE PASSION FLOWER.

THE generic name was given to this flower by Linnæus, in consequence of its filaments somewhat resembling the emblems of our Saviour's passion. The species are numerous, but comparatively few are in general cultivation, and among these there are the favourites for different purposes; some for their elegant flowers and others for their fruit. The whole of the family is indigenous to hot countries.

Their habits are those of strong, free-growing climbers, which do not like their natural tendency tampered with, otherwise they will only be stunted in their growth and unsightly in their flowering.

It would be impossible for us, in our limited space, to describe all the sorts known; therefore, we shall confine ourselves to the handsome species seen in the majority of gardens.

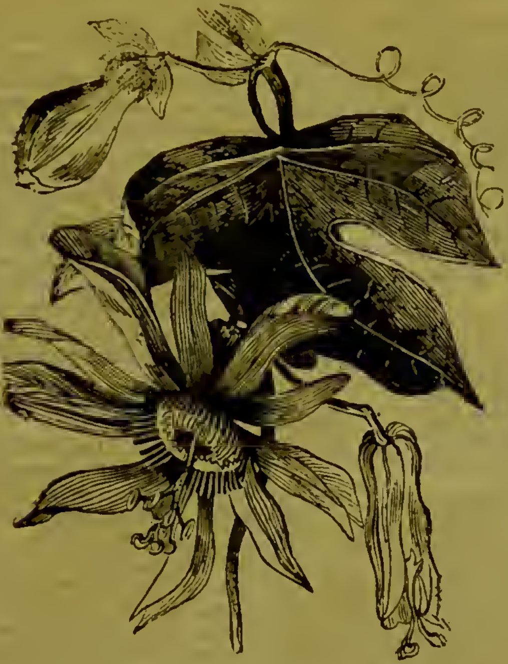
The greater number require a medium heat of from sixty to sixty-five degrees; but when their fruit is ripening, they require a little higher temperature.

The following varieties, some of which we have given illustrations, are the handsomest plants, and are the most easy to propagate and manage of the whole genus.

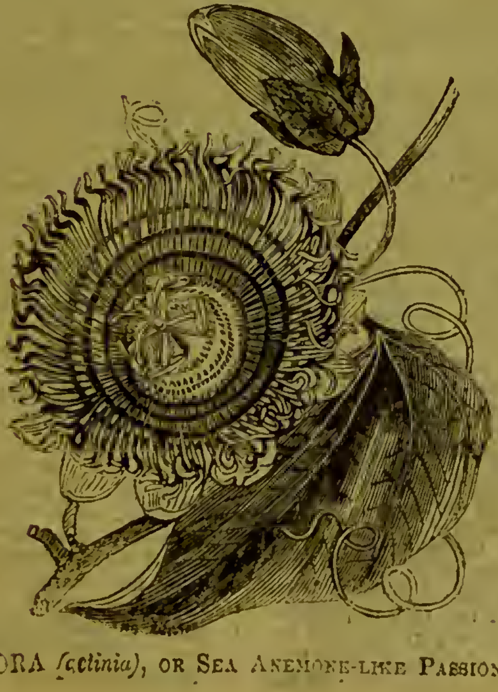
P. kermesina (Crimson Passion Flower).—This is a slender but free-growing species, which flowers abundantly, and makes a very pretty appearance. The leaves are bluntly three-lobed, and the under part, when young, is of a purplish blue. This is one of the best, and will succeed well with greenhouse treatment. The flowers are of a beautiful crimson colour.

P. racemosa (Clustered Flowered Passion Flower).—This is one of the most handsome of the whole family, and bears flowers of a deep red colour, or pendulous terminal racemens.

P. cœrulea (Common Passion Flower).—This stands alone as a good showy hardy species. There are others that nearly approach it in being able to stand our variable climate, but are insignificant when compared to it in beauty of flowers. Of this species



PASSIFLORA *(racemosa)*.



PASSIFLORA *(actinia)*, OR SEA ANEMONE-LIKE PASSION FLOWER.

there are in cultivation five different varieties, slightly departing from the original kind. It has five-lobed leaves, and the flowers are of a pale greenish white: the filaments are purple at the base, white in the middle, and blue at the top. It will cover a wall or espalier of considerable extent in a very short time, and flower abundantly. It will stand our winters well, with no other injury than having the points of their shoots damaged a little. The flowers are blue and white. It should be grown in loam and peat.

P. incarnata (Flesh-coloured Passion Flower.)—A free growing kind, nearly hardy. It has a downy stem, the leaves of three narrow lobes, the calyx of the flower is nearly white, the petals rose-coloured, and the filaments of the ray blue. It differs from other species principally in the long tube of the flowers.

P. actinia (Sea Anemone-like Passion Flower).—This is a vigorous plant, with flowers of a light colour, nearly white; its leaves are about three inches long, ovate, obtuse, dark green on the upper surface, and pale beneath; the filaments of the ray are very numerous, incurved and twisted, and are striped with red, blue, and white. Since its introduction it has become quite a favourite on account of its sweet scent. Its name is taken from the strong resemblance between its filamentous crown, and the actinia or sea-anemone.

The whole of the species may be propagated by cutting, layering, grafting, inarching, or from seeds. Since all these methods of increase are available, and all equally easy of accomplishment, and open to success, it may be thought to be a matter of total indifference which of them is adopted; nevertheless, if some particular object be held in view, it seems to be possible that one of these should be more likely to effect it than another, and here, perhaps, may be found an example of the value and necessity of adaptation in matters pertaining to gardening. If we briefly state the kind of result which each method is likely to realise, and leave the application of it to individuals who are interested, we shall have done sufficient to convince them that even in matters of apparently small importance there is room for the exercise of judgment and discretion. Plants raised from cuttings are soonest brought to a blooming state. In seedling plants, during a portion of their younger days, the influence of the root is predominant, causing the necessary growth and extension of the plant, clothing it duly with foliage, and thus providing the means whereby the sap is to be elaborated and organised previously to its expenditure in the production of flowers.

The stove and greenhouse species require a free, open, loamy soil, more or less enriched, as it may be desired to induce or retard their growth. Several species of passiflora are cultivated as fruit-bearing plants, and they are then called granadillas. *P. quadrangularis* is most generally cultivated; its fruit is oblong, about six inches in diameter, of a sweet, slightly acid flavour, said to be grateful and refreshing, especially in a hot climate, where it is usually eaten with wine and sugar, but to an Englishman's palate, we think it would not be acceptable till every other fruit failed.

Exposing Greenhouse Plants in Summer.—Many greenhouse plants, and especially the more delicate kinds, often suffer much injury from exposure to the sun's rays in summer. When so exposed without the benefit of shelter of any kind, the soil is apt to become so thoroughly dried that it is with difficulty again wetted, and hence the scorched and stunted-looking growth which may sometimes be seen on such plants in the summer seasons. The injury mostly arises not from exposing the stem and branches of the plants but from exposing the pot in which it is growing; the sun's rays acting on the pots, in conjunction with the evaporation constantly going on, soon deprives the soil of its moisture; and as all the tender roots are usually more or less in contact with the inner surface of the pot, their injury is inevitable. It is no uncommon thing to see the soil so much dried as to shrink quite away from the pot, and in this case the roots cannot avoid being more or less injured. Under such circumstances, too, the water which is supplied sinks down as fast as it is poured on, and fails, for a long time at least, to moisten the interior of the soil. Then again, the necessity for constant watering caused by this exposure is an evident waste of time. When plants are turned out-doors (and also when kept in-doors) their roots ought to be sheltered by some means from the influences alluded too; plunging the pots in some open porous material will answer the end as well as anything; and of the substances that may be employed, moss, coal ashes, rough peat, sawdust, or fine charcoal are among the best that can be employed. It is desirable, also to afford the entire plants a very thin shade during the intense sun heat of summer, but the lighter the material employed the better.

CULTURE OF THE IRIS SUSIANA.

Amongst the whole series of flowers classed under the name of iris, there is not one that demands more the attention of the florist than the Susiana kind; so called because being of eastern origin, yet freely flourishing in our gardens. All the writers on flowers have named it, and the majority of them have distinguished it, according to the place whence it was first introduced, by the names, Iris Turcica, Iris Chalcedonica, and Iris Susiana, that is, the Turkish, Chalcedonian, or Susian iris; some have added to this the form, size, or colour of the flower. Clusius speaks of it as "Flore majore variegata," with a great variegated flower, and C. Bauhine speaks of it, "Flore maxima ex albo nigricante," that is, "Susian iris, with a large black and white flower."

Linnæus, in this as in other instances, has named it from the essential characters, and consequently adapted to it terms which cannot be applied to any other. It is the great glory of that celebrated naturalist that all his names are succinct descriptions, and he who knows them cannot but at sight know also the plants to which they refer. He calls this flower "Iris corollis berbatis caule foliis longiore unifloro;" the single flowered bearded iris, with the stalks longer than the leaves.

The root is tuberous, thick, irregular, and succulent; the leaves are long, moderately broad, and of a fresh green. They rise six or eight together, and surround one another at the base. They are sharp at the points and edges, and of a tolerable firm substance.

The stalk is a foot and a half high, round, thick, jointed, and of a pale green, and it supports a single flower, the largest of all the iris kind, and when nearly viewed, one of the most elegant. It is composed, like those of the other irises, of six petals, amongst which appear the three leafy heads of the style so much resembling three others, that the flower has been usually understood to be nine.

The whole flower at a distance resembles the feathers of some Indian bird, or the skins of serpents, for the upper petals are mere films.

The flower has no scent, nature thinking that it had done enough for it in giving it its beautiful colouring.

The Iris Susiana is a native of the east, whence it was first brought into Europe by the Dutch, in the year 1573. It is easily increased by parting the roots in autumn; but the best method of raising it is from seed, for the flower of such plants, when rightly managed, exceeds those from older roots, and although they never vary in their general colouring, yet they will afford a very pleasing diversity in the disposition, form, and size of the spots.

The best compost is a mixture of equal parts of garden mould, and rich black earth from under the turf in a meadow. In this, with proper management, the plants will flower in full perfection.

ARTIFICIAL ROCKWORK.

Having been engaged during the last twenty-five years as a landscape gardener, I have frequently succeeded in adding materially to the beauty and diversity of pleasure grounds, flower gardens, &c., by the occasional introduction of artificial rockwork; some of the details of which have been already published in the works of the late Mr. Loudon, and I hope that a brief description of the method I have practised in building these ornamental works in the most efficient and economical manner, may not be wholly uninteresting to the gardening public. A quantity of hard rubbish, such as old bricks, stones, &c., will be useful for the construction of the body of the work, and will save more expensive materials, while the most prominent parts should be constructed of burrs or large clinkers, which are to be obtained in most localities at a very moderate price. These will be found useful in imparting to the work the necessary irregularity and freedom of outline, which constitutes the chief excellence in all artificial works of this character. I have made it a practice to imbed a number of flower pots in suitable niches at heights and distances proportioned to the magnitude of the work, planting in them creeping plants, &c.; the projecting parts of the work must be secured by bonds of ship timber or similar material, and set in cement. The bars, &c., used for this purpose must be so large that their centre of gravity shall fall decidedly within the base of the structure. Having completed the erection of what may be termed the skeleton of the work, the entire mass must now be rough-cast; when this is sufficiently dry it must be coloured in such a manner as to imitate exactly the various strata of the rock intended to be represented; a mixture of lime, water, oil, with ochre, &c., of various colours, so combined as to produce the tints required, will be found very serviceable for this purpose, and will resist the effects of the weather admirably.

If a supply of water can be obtained, from a spring or otherwise, a cascade or fountain combined with the rockwork will produce a most beautiful aspect.—*B. Andrews.*

THE GOOSEBERRY CATERPILLAR.

It is well-known that the gooseberry caterpillar is the young of a particular saw-fly. Towards the end of the season many of these caterpillars descend to the ground, and pass the winter in the chrysalis state, from which the fly emerges in summer and proceeds to lay its eggs along the midrib and veins of the gooseberry leaf. If you examine the back of a leaf soon after the young caterpillar begins its ravages, you will see the long lines of clear white eggs, the size of pin points, from which the caterpillar has just emerged, or is about to do so. The larger sized caterpillars, which are often seen at the same time with the minute or newly-hatched ones, may possibly have passed their early stage in the ground during winter, and make their appearance prepared for action after the sun has matured them. The greatest number, however, I should think, and those by which most damage is done, are those hatched from the eggs laid that season. With regard to the remedy, I was recommended to try the powder of white hellebore, and from my experience last year I should be inclined to declare it a complete specific, were I not kept in check by the feeling that something may have been owing to the season, and that it is not the part of a searcher of the truth to be too dogmatic. The remedy is cheap, however, and easily applied, and the success of it would soon be thoroughly tested were a few only of your correspondents to give it a fair trial. The mode of using it is, whenever you discover the least symptom of the caterpillar, to give the bushes a good syringing with water and then dust them over with the powdered hellebore, by means of a common flour-dredge or other contrivance of that sort. In a few minutes you will see the caterpillars dropping in great numbers from the bushes, and in such a state as to be unable ever to creep up again. What is better, the application seems to be effectual in keeping the saw-fly from laying its eggs, so that one or two applications are effectual for the season. The powdered hellebore can be got from any druggist. It does not seem to have any material effect on the caterpillars which infest apple and pear-trees.—*Correspondent of the Gardeners' Chronicle.*

Chester Plums.—These are rich plums and great bearers. They ripen about the latter end of September.

Sage.—There are several sorts of sage, but the common red is that chiefly used for culinary purposes, and the green both for these and medicinally for tea. There is a narrow-leaved green sort, called tea sage, or sage of virtue, but the broad-leaved green is reckoned by some better, not being so heating and unpleasant to the taste. The variegated sorts of sage are only considered as ornaments in the flower garden or shrubbery. Sage is propagated by slips, or cuttings of the last year's shoots in April or May, choosing those that are short and strong; or if the young shoots in the early part of summer, set in from an inch to the top, and about four inches distant, in some shady place. These, if they spindle tall in the summer, should be pinched down in time to about three inches, in order to form bushy heads. They will be well rooted in August, when they should be planted a foot asunder, in a sunny and sheltered situation from the North and North-east, so that they may stand severe winters, which they will the better do, if the soil be rather poor.

Purslane.—Purslane is a small tender annual plant, a salad, and pot-herb, raised from seed in the spring, in a hotbed or warm border, in two, three, or more small crops, as may be required, as the plants soon go to seed the same season, producing small succulent shoots and fleshy leaves, which are the plants used. Cut for use in their young growth. The plants are raised from seed in any of the spring months. An early crop may be sown in February or March in a moderate hotbed, as the seed and plants are too tender to grow in the open ground before April, but in that month and May some may be sown in a warm border, and if a constant supply of young plants be required all summer and autumn, sow some every month till August. Sow either in small drills, four inches asunder, or on the surface; and spread each over, or rake in the seeds. The plants to remain where sown. When the shoots of the plants are three, or four, or five inches high, and furnished with leaves, they are then proper to gather for use; cutting off low, they will shoot out again. To save seed, leave some plants to run; they will ripen seed in autumn.

ON THE FORMATION OF A FLOWER GARDEN.

In regard to the best method of laying out a flower-garden, scarcely two persons agree; and in many of the best writings on the subject, there appears to be a total absence of all principle. It should, however, be recollected, that in the formation of gardens the same piece of ground may be laid out twenty different ways, and all be equally good; that is to say, each may have as many admirers as the others; nor does it follow that because one scientific man likes one better than the rest, that it is in reality better, any more than a man chooses a carpet before fifty others that are laid at his feet, it shall in reality be better than the rest. There are certain rules laid down by certain people whose taste has no more claim to govern that of the present day, than the fashions in the days of Elizabeth have to govern those of the days of Queen Victoria. In the general formation of a mixed flower-garden the plants, shrubs, and trees of all denominations are admitted, too often, in heterogeneous masses, without the least attention being paid to their distribution, as far as regards their relative heights, their colours, times of flowering, or the effects that they ultimately or immediately have in landscape. Many err in planting this sort of garden, by introducing by far too many species, and those often are ill-selected; a moderate number of select sorts, or what may properly be called good border flowers, and that number equally selected from the different colours of such plants as are known to flower from February to October, are what ought to demand the exclusive attention of those who would plant a flower-garden of this sort. Rarity and variety should not be condemned, but it is always better to have such confined to the botanical flower-garden, or in a border either alphabetically or classically arranged. It has been observed by an intelligent writer upon the subject, that flower-gardens have been on the decline in this country for the last half-century, and the cause assigned is, that the great influx of new plants during that period has induced gardeners to be more solicitous about rare and new plants, than well-disposed colours and quantity.

We have all read of the elaborately designed flower-gardens of Italy, France, and Holland, during the sixteenth and seventeenth centuries. Professional men, and amongst others, the late Mr. Loudon, have shown themselves indefatigable in carrying on a History of Landscape Gardening; describing its changes, recording the merits of the various styles, as well as pointing out their various defects, with the laudable view of defining the taste, and fixing the execution upon something like sound principles. It is the advice of Mr. Loudon to keep up the artistical character of a flower-garden, by disposing all the plants on circular beds, each containing a group of one species or family; and to give variety, making the circles of different sizes, varying from eighteen inches to six feet in diameter; and, as another source of variety, placing the circles singly, or in larger or smaller masses or constellations, as he calls them. In one place a large circle may be surrounded by several smaller ones, or where a thicket may be required, two or three large circles may be irregularly fringed with a number of various sized ones, always observing that no two circles be nearer together than two feet. If squares were used instead of circles, more variety might be given, but as angles cannot be so well concealed by planting, the curving outline of circles is to be preferred.

The adoption of this style, for giving pleasing features to a flower-garden, affords great facilities to the flower gardener for grouping his plants, and in choosing just such sized beds as will contain his stock of plants, whether perennials, biennials, or annuals. Single trees of the most ornamental character may occupy the centres of some of the larger circles, and these may be accompanied by shrubs of similar foliage and hue; and from the diversity of tints, and manner of leafing of the different groups, if judiciously associated or dissociated by the planter, much of the beauty of the garden will arise.

It is a matter of dispute amongst some of the most skilful and talented floriculturists, whether the beds of a flower-garden ought to be planted with one kind of flower, or with a diversity. The arguments of the advocates of the former system are, that in the formation of that assemblage of flowers, which may be distinguished by the term of the mingled flower-garden, it is essential that the separate parts should, in their appearance, constitute a whole; and this appearance is not incompatible with any form in which the ground may be thrown, if attention be given to the manner of planting. In some gardens the appearance of a whole is entirely destroyed by the injudicious taste of setting apart distinct borders for *pinks*, *hepaticas*, *primulas*, or any other favourite kind of flowers; also for different species of bulbs, as *anemones*, *ranunculuses*, *hyacinths*,

&c.; these distinct borders, though beautiful in themselves, break that whole which should always be presented to the eye by the mingled flower garden, as single beds, containing one species only, form a blank before that species produces its flowers, and a mass of decaying leaves when the glow of their petals is no more. The reverse of this mode of planting is essential to the perfection of the mingled flower garden, in each border of which there should be at least two of every species; but the precise number must be regulated by the force of colour displayed by the plant, and the size and relative position of the borders.

It must be admitted that the foregoing remarks contain some very valid objections to the system of planting the beds with only one species of flowers, and amongst these objections, we consider no one more plausible than that of the barren appearance which a bed would have before a particular species came into flower; and the still worse appearance which the bed would exhibit after the bloom is over. In the geometrical gardens of the Dutch, the one species system is now universally adopted, and it has become the fashion in this country. It must, however, be admitted that the grouping together of plants of species, so as to form a map of colour, is of recent origin, but not less valuable on that account, for, in fact, it has very much to recommend it to more general adoption, not only in large flower gardens, but also in small suburban residences. As the plants are now numerous for such a purpose, compared with what they were, little difficulty will arise in making a proper selection, and when made, as little trouble attends the keeping of them, because the greater portion requires not much more care than what can be attained by pots filled with leaves, or any fermenting material of equally heating properties.

In order more fully to illustrate the formation of a geometrical flower garden, the beds or compartments of which are to be appropriated to one species of plants; we give at p. 249 a diagram, which consists of fourteen compartments, with the list of the plants to be planted in each compartment.

1 Verbena picta
2 Calceolaria rugosa
3 Verbena Tweediana
4 Eschscholtzia crocea
5 Frogmore scarlet geranium
6 Petunia erubescens
7 Verbena Neilli
8 Calceolaria integrifo.
9 Verbena incisa
10 Verbena pulchella
11 Petunia nyctaginiflora
12 Verbena Hendersoni
13 Calceolaria angustifolia
14 Verbena Lambertiana

The following may be considered as the proper mode of culture for those plants which are intended to be put into the flower garden. Previously to the winter setting in, that is, about September, the pots should be set in order; then get a number of pots or boxes, fill them up within three inches of the rim of the pot with turfy soil, over which put sand and peat earth in equal proportions, sufficient to fill the pot; then press it down and take shoots for cuttings, rather firmer in texture than otherwise; prepare them with a sharp knife, allowing two joints to be inserted in the soil, water them, and then set the pots in the pits, not at a great distance from the glass, and keep the pits close till the cuttings are rooted, when occasional airing will be necessary, and in frosty weather additional covering will be required, but by all means admit air and light, whenever it can be done conveniently. When greenhouses are accessible, much of what has been said may be obviated; as after the plants are rooted, they may be put on shelves, and may either be kept in the cutting pots, or potted off singly until May, when they should be planted out into the flower garden, and then pegged on the ground, if they be naturally of a creeping habit of growth; and even if they be not so, instances occur in which it may be done with propriety.

In the formation of a geometrical flower garden, Mrs. Loudon says, in her "Gardening for Ladies," the best way of designing it, is to draw a figure on paper, consisting of angular, circular, or serpentine forms, to represent beds, and arranging them so as to form a whole. Where the space to be laid out is small, the figures may be more complex, and the separate beds more grotesque in their shapes, than when the garden is large; but where a large space is devoted to flowers only, simpler formed beds should be adopted. The reason for this is, that when the beds are of bizarre shapes, they require to be seen at one *coup d' œil*, to have a good effect, whereas simple and uniform shapes may be seen either together or alone, without producing any disagreeable impression on the mind. Whatever figures may be adopted, as soon as they have been sketched on paper, each bed should be coloured, in order to try what arrangement of colours will be best suited to the form of the beds. The colours, of course, should be those usually found in flowers; for example, yellow, scarlet, blue, pink, orange and purple; and they should be arranged, not only with a view to effect, but with regard to the practicability of filling the beds with suitable flowers.

In order to understand the best method of combining colours, it is necessary to know that there are three primitive colours, blue, red, and yellow, and four compound ones, purple, green, orange, and violet, each of which is composed of two of the primitive ones. In the arrangement of the colours of flowers, the great art is, never to let a compound colour be placed between the two primitive ones that compose it, as, for example, green should not be placed between blue and yellow, nor purple between red and blue, as the effect would be disagreeable to the eye, and the colours would be killed, that is, they would lose their brilliancy.

Low plants producing abundance of flowers must be chosen, and these must be carefully trained or pegged down so as to cover the beds entirely, or the effect will be destroyed. If, for example, a bed of scarlet be wanted, a lady would probably think her gardener would have little trouble in finding abundance of scarlet flowers. Now the scarlet flower to be used depends entirely upon the position of the bed, and the kinds of flowers used in the other beds. If these flowers have been dwarfs, and trained so as entirely to cover the ground, the scarlet flower to be used should be the *verbena melindres*, or some of its varieties, and each stem should be pegged down close to the ground. Some gardeners spoil the effect of a garden of this kind by putting too many plants in each bed, and when this is the case, the plants frequently produce more stalks than neither leaves or flowers. Whenever, therefore, beds of verbenas look overgrown, and of a dingy green, the plants should be examined, and half of them taken up. Three plants are quite sufficient for a bed four feet wide, and twelve feet long, and less in proportion. It must never be forgotten that the bed appears fuller when there are only a few plants in a bed, than when there are many, as, when there are only two or three plants in a bed, there is room to peg the branches down, and this makes them flower profusely; whereas, when there are six or eight plants in the same space, the branches are forced to ascend, and the beauty of the bed is destroyed.

A geometrical flower garden never looks half so well on gravel as on grass. Where the walks are of gravel, the beds should have a neat edging of box, or of any other plant that may be preferred, kept quite low and narrow by frequent pruning, but which should never be clipped.

THE DAHLIA.

It must be acknowledged that the merit of first carefully attending to and cultivating this beautiful flower belongs exclusively to the continental gardeners; for although we had received them, originally, almost as soon as the French and German gardeners, yet, if not lost, they had nearly gone out of notice with us; whilst, on the other hand, in France and Germany they had increased as much in number as in beauty. Persons fond of gardening, who visited the continent on the return of peace in 1814, were surprised with the splendour and varieties of the dahlia in the foreign collections. In the winter of that year several roots were imported into this country, and since that period we have made up for former neglect, as is sufficiently evinced by the splendid exhibitions of these flowers, both in the public and private gardens round London.

The genus was named in honour of Dahl, a Swedish botanist; some objections were, however, made at first to this name, under an erroneous impression, that it had been already appropriated to another genus; and a further objection was taken to it from the similarity of its sound to Dalea, a genus so called after our countryman Dale. The first of these objections induced Professor Wildenow, in his *Species Plantarum*, to apply to these plants a new name—that of Georgiana, (Georgi, an eminent Russian traveller and botanist)—which he retained in his other works, and in which he was followed by Monsieur De Candolle, but the original name now seems to be fully established, and is retained in the new edition of the *Hortus Kewensis*, as well as by the French botanists.

The plants from which three supposed species were described were sent from the botanic garden at Mexico to the Royal Garden at Madrid, in which the one, called by Professor Cavanille *pinnata*, flowered in October, 1789; his rosea and coccinea produced flowers a few years afterwards, and all were successfully figured and described by him in his *Icones;* the first in 1781, the two last in 1794. They do not seem, however, to have been successfully treated, for it appears that with him they attained the height of three or four feet only, and did not flower till October. In 1802 plants of each were transferred from Madrid to the Jardin des Plantes, at Paris, where they grew so well as to enable Monsieur Thoain, in 1804, not only to describe and figure them, but also to treat on their cultivation. In May, 1804, seeds of the three kinds were sent from

Madrid by Lady Holland to Mr. Buonaiuti in England; from these, good plants were produced, one of which, the pinnata, flowered in September following, and was figured by Andrews in the *Botanist's Repository*. In the succeeding year, plants of the rosea and the coccinea also flowered at Holland House. Though the importation of the seeds was the most successful as to its produce, for from it nearly all the plants then in our gardens were obtained, yet the original introduction of the first species was, on the authority of the *Hortus Kewensis*, from Spain in 1728, by the Marchioness of Bute, but it is probable that the plant so introduced was lost, as we do not find any further notice taken of it. The other species, then called the coccinea, was actually flowered by Mr. John Fraser at Chelsea in 1803, when it was figured in the *Botanical Magazine;* this plant afterwards perished. Mr. Fraser is said to have obtained it from France, in 1802, the same year in which it was introduced from Spain into the French gardens. It also appears that in the autumn of 1803, Mr. Woodford flowered at Vauxhall a plant of Cavanille's rosea, which he had obtained from Paris, so that, independently of one introduced by the Marchioness of Bute iu 1789, it seems that both species had flowered in this country before the seeds were transmitted by Lady Holland.

At Madrid they were a long time in the royal garden without any indications of change, and it will be seen that after they were spread through Europe, some years elapsed before any extensive increase or variation took place.

M. de Candolle, it is said, from good authority, obtained from Madrid the plants which he cultivated at Montpelier, about the same time they were sent to Paris. His memoir was printed in 1810, and he therein describes only five varieties of Superflua, viz., Rubra, Purpurea, Lilacina, Palleda, and Flavescens, and three varieties of Frustranea, viz., Coccinea, Crocea, Flava; he probably when he wrote had not obtained any double flowers, though he evidently expected such would soon be produced.

M. Otto as early as 1800 obtained from Dresden, for the royal garden at Berlin, a plant of the Pallida of the *Hortus Berolinensis*, and in 1802, a plant of the Purpurca was sent to him from Madrid, but he had not any new varieties of his own seed till 1806.

The first introduction of the dahlia into the royal gardens at Berlin has been already noticed as having occurred betwecu 1800 and 1805.

According to M. Otto, the chief varieties were raised between 1809 and 1817, but that the first which showed themselves were produced in 1806 and 1807. In 1813 he began to pay more particular attention to their cultivation, and improve their kinds by cross impregnations of the stigmata of the florets. The first double flower he possessed came from Stutgard, but a complete double one flowered in 1809; it was dark red, exactly similar to that from Stutgard; this had at first blown only semi-double. Three more double ones were raised in 1815 and 1816. A pure white single one was given him in 1808, and in 1810 he raised another one for himself. He mentioned that in the catalogues of the nurseries at Berlin, from 80 to 100 sorts are enumerated for sale, but he considers the really good ones to be about thirty.

In our own country we had an early promise of great success, and had we hit upon the right management in keeping the plant when produced, there is no doubt but that we should have been equally successful as the continental gardeners in obtaining varieties. Mr. Buonaiuti saved seeds from the plants he raised in 1804, the produce of which seeds gave him in the succeeding year, nine varieties of that which was called pinnata, two of which were double, one with lilac, and the other with dark purple flowers; of the single flowered plants, some were certainly dark coloured; four figures were published from them at the time; the paler coloured varieties were chiefly considered as belonging to what was then called rosea: he had also two varieties of coccinea, the original deep coloured one, and a paler one, which, though called by him crocata, was the pale yellow variety, as is apparent from the figure of it, published in the *Paradisus Londinensis*. Mr. Salisbury also obtained several varieties from the seeds which he received from Holland House, in 1806; these he had particularly noticed in his paper, printed in the first volume of the *Transactions of the Horticultural Society*. In the fifth volume of the second edition of the *Hortus Kewensis*, which was published in 1813, the varieties of superfina there named are *purpurca, lilacina* and *nana*, the latter being taken from a double variety, figured in Andrew's *Botanical Repository*, but which is certainly not particularly entitled to be considered as a dwarf plant. The varieties of *frustanca* are given in the *Hortus Kewensis*.

It is generally believed that a blue dahlia will never be obtained, the variation being from purple to yellow, which is contrary to the general operations of nature, and on the same principle the blue flowers may be changed by cultivation into red and white, but never into yellow.

OCTOBER.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN OCTOBER.

This is the most important month in the year for all planting operations, and especially the removal of all deciduous shrubs and trees. Vegetation in their case has done its work, the leaf falls; and although from that period until the time that the buds begin to swell will answer every purpose, if there be one month better than another, that month is October. All alterations, therefore, of the flower garden and shrubbery should be commenced, and the trees and shrubs of any important size be selected and marked ready to be taken up when required, and not before.

Auriculas, already in their winter quarters, require but little care beyond protection from the hot sun, and excessive rains, for now they do not require any water for weeks together, being in a state of comparative rest; but they must not be allowed to flag.

Chrysanthemums in pots should be placed where they are to flower, whether it be in the dwelling-house, greenhouse, conservatory, or the open air; but if they are to run the chances of the open air, let the pots be plunged, as it saves the roots. Cut down any that have declined flowering, and remove the bloom stalks of any that have had their blooms cut off by frost. The potted ones in the houses must be watered from time to time, as the swelling blooms exhaust the moisture rapidly, and any want of it at this period will stint the bloom.

Anemones and Ranunculuses.—Some plant these before and some after winter; they will do either way, but if the soil and situation be not very unfavourable—that is cold, bleak, and wet—the best time is now, or in the beginning of November. In a bleak situation, or a wet soil, delay planting till February. The treatment of these flowers is so similar, that in order to prevent repetitions we have classed them together. They prefer a rich loamy earth. In light soils they often languish in spring and early summer droughts, and sometimes do not show their flowers fully. To garden earth, therefore, of a middling texture should be added some strong clayey, or loamy soil, and it should be well enriched with the cooler dungs; that is, of cows or hogs. The whole should be well mixed and incorporated to the depth of fifteen or eighteen inches. The roots may be planted in four-foot beds with broad alleys.

Bulbs.—About the beginning or the middle of this month the general planting of bulbs commences, being the best time in the year for that business. Bulbs in general like a light or sandy soil, and for the choice kinds it should be well prepared and enriched. But the common sorts, planted in patches about the borders of the flower ground or shrubbery, must, of course, fare as other flowers do. Previously to planting, however, the patches should be well stirred up, and the earth made fine to the depth of a foot or fifteen inches. The same should be done along the tops of the borders, where snowdrops and crocuses are meant to be planted in a row.

Crocuses and Snowdrops may be planted at six or eight inches off the box, four or five inches asunder, and two inches deep. In beds four feet wide they may be planted in rows across them, at six or seven inches asunder, three or four in a row, and two inches deep. These small roots may be planted with a blunt dibble, the ground being previously made quite loose and fine, or they may be placed in flat drills, which is a better method.

Biennials sown in the summer for flowering next year, if not planted out, may be removed at an early part of this month. They are better transplanted now than in the spring.

Jonquils.—Double and single jonquils may be planted at five or six inches apart, and three inches deep. They like a strong soil, but they will do very well on a medium soil, between that for tulips and hyacinths. Jonquils do not flower so well the first as the second, or third year after planting, and, therefore, should stand two or more years in the ground.

PANSIES.—The cuttings of pansies must be treated according to circumstances. If potted, they may be preserved in cold airy frames, and if not potted, this may be done. Others will have been, or may be, if the weather be favourable, planted out in beds, and those may be protected when cold weather sets in by sticking a few pieces of evergreen boughs among the plants.

PRUNING FLOWERING SHRUBS.—Prune roses and honeysuckles, and all other sorts of flowering shrubs and evergreens. The pruning of roses should be carefully performed. No plant requires more pruning than the rose. They are naturally irregular growing shrubs, and much knife-work is necessary to keep them in order. In order to have a full bloom, every last year's shoot must be cut down to two or three eyes, for the purpose of producing abundance of shoots and, of course, blossoms. Tree roses must also be pruned in very closely to keep them ornamental. All suckers which rise from the root should be taken away, and let the shrubs be mostly kept to a single stem near the ground. When you have finished the pruning, let the ground between such shrubs as stand wide be either for the present well hoed and raked, or neatly dug, observing as you proceed to cut off every long straggling shoot.

DAHLIAS should be lifted in the course of the month, and dried in the houses, stems downward, in which state they should be stored, in order that any moisture which may be on the stem may drain out, instead of lodging and rotting the crown, than which nothing is more likely if they be neglected. It is only necessary to keep the tubers from frost, wet, and excessive heat; but from the time they are taken up, they should always be kept stems downward, or at least so much on one side as to enable all moisture to run away from, instead of towards the crown of the tuber. Whether they be kept in a greenhouse under the stage, which is a good place, or in boxes covered up well with straw, or pitted like potatoes, or in a common room in a dwelling house, or hanging up in a kitchen, it matters not, so that the place be not hot enough to shrivel up the tubers, nor wet enough to rot them, nor cold enough to freeze them.

BULBOUS IRISES.—The earlier in the month that bulbous irises be planted the sooner they will flower in the following summer. Those which are not planted till spring, or late in the autumn, seldom flower well, if at all, the season following. They should be planted (if in beds) at eight inches or a foot apart. Take them up once in three or four years.

PLANTING HYACINTHS IN THE FLOWER BORDERS.—The more common varieties of hyacinths which are to be planted in the borders of the flower garden will succeed well, if planted at this season, where they are to remain to flower. The only preparation that is necessary for them is to loosen the spot where each patch of two or three bulbs is to be planted to the depth of a foot. If the soil be strong and damp, a little sea or river sand may be added to it, in order to render it more light.

WALLFLOWERS.—These, if not planted out in the borders where they are to bloom, should be got out without delay. The double ones are best preserved in pots in the frames till the spring, as severe frosts would greatly injure them.

SPRING FLOWERS of all kinds should be especially attended to. By far too little care is bestowed to obtain them in abundance, and thus many of the charms of a flower garden are allowed to be lost.

SECOND WEEK IN OCTOBER.

CARNATIONS AND PICOTEES.—Go over the plants that have been recently potted; clean and pick off the dead foliage, stir the surface of the soil now and then, and see that it be moderately moist. Avoid stewing the plants under glass as much as possible, such treatment only tends to weaken. The more air they have the better; protection from heavy storms and continued rains is all that is necessary. Continue to take off the late rooted layers.

TULIPS.—It is now time to look to these bulbs, they should be sorted, cleaned, changes made, or new sorts added, &c., that all may be in readiness for planting. The beginning of November is generally the favourite time for this operation—we advise this month, particularly if the fibres are putting forth, which is certain to be the case if the weather continues mild. If nature is studied, these roots should be fixing themselves in the soil, instead of being exposed to the action of the atmosphere. Attend to the preparation of the beds, if not ready; lose no time in turning and adding fresh soil if necessary, that it may be sweet, and in a friable state to receive the bulbs.

Pansies.—Prepare the beds for the reception of the plants intended for spring flowering, and commence planting as soon as the soil is fit to receive them; it is bad to plant when the latter is saturated with water. Examine your note book, and procure the new sorts selected during the season, that you may get them out in good time to establish themselves before the winter months come on.

Dahlias.—Gather ripe seed before the frost sets in if possible.

Ranunculuses and Anemones.—This is a very excellent season to plant ranunculuses and anemones: the best varieties should be planted by themselves in beds which should be three or four feet broad. Plant six rows in every bed, and let the roots be six inches distant in each row; at that distance they will grow strong, and the flowers will show themselves to the best advantage, and must be planted not more than two inches deep over the crowns, observing that the bed in which the best sorts of these roots are deposited should be protected in winter, when the frost is very severe. Some of the common sorts of ranunculus and anemone roots may also be planted in the borders in assemblage with other flowers, either in a row towards the edge, or in small patches in different parts, where they will make a very agreeable appearance in the spring. But the best method of planting these sorts in the borders is in little clumps or patches, as previously intimated, forming with the finger small circles six inches in diameter, about a foot from the edge of the borders, or in a varied manner; plant in each three, four, or five roots; that is, one in the middle, and the rest round the edge of the circles; and these little clumps may be from a yard or two, to eight, ten or twelve feet distant.

Rose Trees for Flowering.—This is a very good season for planting rose trees in pots for forcing. Take good loamy earth from a quarter of the kitchen garden, mix with it very rotten dung, and run it through a very coarse screen or sieve; or rich earth, in which melons have been grown, is well adapted for rose trees. Have pots of a good size in readiness, and take strong plants out of the flower borders or beds; cut off any straggling shoots, trim their roots a little, and plant them in pots, taking care to let the mould fall in between their roots, pressing it with the hand so firm as to keep the plants steady in the pots. If it be required, they may be forced the ensuing spring, but it is best to pot them a year at least before they are forced; they will, after that period, be able to produce fine strong rose buds. In the autumn, water the rose trees in pots occasionally with manure water, which will enrich the mould about their roots.

Laurels, Phillareas, Laurustinus, and other Evergreens.—If there be any walls or palings in the garden or ground that you wish to hide, plant against them laurels, phillareas, laurustinus, or any other evergreen. On account of its beautiful cluster of berries, the pyranauthus is a pretty shrub to plant and train up against a wall.

Narcissuses. — Plant narcissuses of different kinds; they should be planted in beds of light, rich earth. Set them in rows about six inches apart, and put them about four inches asunder in the rows, and cover them three or four inches deep. Small roots, not come to their full size, may be planted closer together in the beds. Narcissuses may be planted in clusters in the flower borders, and they may be potted for forcing in the winter.

Lilies.—All the species of this beautiful family deserve a place in the flower garden. The more common sorts, such as Lilium candidum, Lilium bulbiferum, Lilium Martagon, will grow almost in all situations and soils in the flower borders, or in the shrubberies, even under the shade of trees. The more valuable species, such as Lilium Canadense, Lilium Japonicum, and Lilium Philadelphicum, require more attention, and will repay any care that may be taken with them by the beauty of their flowers. These are rather tender to stand out with safety in our flower borders during the winter; they should, therefore, be planted in the most favourable situations, and protected during winter with a hand glass, as well as the surface of the ground round their roots with coal-ashes, to resist the effects of damp, and also to elude the frost, so that they may be planted in deep pots, known by the name of bulb pots, and removed during winter into the greenhouse, or into pots. But bulbous plants of their size seldom flower as well in pots as when planted out, for want of sufficient scope for their fibres, which extend themselves much beyond the limits of ordinary sized pots.

Tulips and Hyacinths.—Tulips and hyacinths may now be planted; each variety planted in beds by themselves, and the inferior sorts may be planted in the borders, about a foot from the edge, in a straight line. A good soil for these roots is a light, mellow earth, of a dry and sandy nature. Dig the earth very fi [illegible] about three feet wide; plant four rows in each bed, eight inches apart, and put the bulbs six inches asunder in the rows.

HONEYSUCKLES. — Cuttings of honeysuckles may now be planted; all the sorts of these shrubs may be propagated by cuttings, for the cuttings of the young shrubs will put out roots very freely, and make pretty plants in one year. Many other sorts of hardy shrubs and trees are to be raised from cuttings, and this is the best time to plant them. Observe that it is the last summer's shoots that are to be used for cuttings: let strong shoots be chosen, and shorten them to about nine, ten, or twelve inches in length; then plant them in rows a foot asunder, and set the cuttings about six inches distant in the row. Let every cutting be put half way into the ground.

PLANTING IN POTS. — Planting in pots may now be performed to many sorts of perennial flower plants, as also to curious or durable flowering shrubs and evergreens, both with the design of having the opportunity of moving them in these said pots, for decorating any particular compartments in spring and summer, and also in some sorts for removing them to places of shelter during severe weather in winter.

PLANTING BOX.—This is the most proper season of the year for planting box; for at this time it will very soon take root. In order to make neat edgings, some short bushy box should be obtained, and this should be slipped or parted into moderately small slips, with roots to each, and the long woody roots cut off, and the tops trimmed even.

THIRD WEEK IN OCTOBER.

AURICULAS.—So long as they are kept clean, moderately moist, freed from destructive insects, and protected from heavy rain, they will take no harm by remaining in a southern aspect.

TULIPS. — Growers of these beautiful flowers should not let the time pass, but attend at once to the directions given in last week's operations. Everything ought now to be in readiness, and planting commenced and finished while the weather will permit, and the soil is in a proper state for the purpose.

PINKS.—Keep the surface of the soil in the beds open; slight stirrings always have a beneficial effect. Remove all sickly and unhealthy plants, and replace them with more healthy stock, that the beds may have a green and lively appearance.

CARNATIONS AND PICOTEES are growing fast. Water where necessary—but it should be given in moderation. They do not require soaking; a little and often is best; for while they are growing, they must be supplied with moisture.

HYACINTHS.—The choice hyacinths may be planted very much as directed for tulips, with respect to distance and depth, but they require a different kind of soil. It should be many degrees lighter, in short and rich sand. If sea-sand can be procured, so much the better; but, otherwise, use clean pit sand, or small river gravel, a mixture of cow's or hog's dung, with that of the stable, a large proportion of vegetable earth of decayed tree leaves, being well decomposed, and an ample quantity of sand, may, with common garden earth, be made to form a good soil for the hyacinth, as follows: good earth a third, sand a third, dung as above, a sixth, and vegetable earth a sixth part.

POTTING FLOWERING SHRUBS FOR FORCING.—This is a very proper season in which to lift and pot shrubs for forcing, afterwards to be placed in the drawing-room or the greenhouse. Many kinds of flowering shrubs are fitted for this purpose, and are forced with success in the stoves of peach-houses, grape-houses, &c., such as roses of various kinds, Persian and common lilacs, syringa; dwarf almond; mezereon, white and red; honeysuckles, hypericum frutex, jasmines, and many others, according to fancy. They should be lifted with good roots, and as much earth as will readily adhere to them, and should be put in good sized pots or tubs, according to their kinds, and the respective sizes of the plants, using fresh and moderately rich soil in potting them; afterwards giving each a little water, to settle the earth about the roots. The pots may then be taken into the stove or other forcing-house, in various successions, or otherwise, as shall be thought most proper, in order to prepare them for the greenhouse or the parlour.

PERENNIAL FLOWER PLANTS.—The roots of a variety of perennial flowers. such as the autumn sunflowers, golden rods, perennial asters, hollyhocks, &c., may either be pulled entirely up, and divided into lesser parts, or a few may be slipped off the old roots as they stand. Scarlet lychnis, leonotis, campanulas, catch-fly, rose campions, double daisies, primroses, polyanthuses, thrift, London pride, and several kinds of the lesser fibrous-rooted flowering plants, may also be increased by either of the above methods. The roots of monkshood, flag irises, calceolarias, peonies, with others of the fleshy-rooted kinds, should now likewise be separated, and the strongest portions of them planted where they are intended to blow the succeeding year, whilst the lesser portions may be planted in nursery beds until the following season.

DECIDUOUS FLOWERING SHRUBS AND TREES.—In this month, many kinds of hardy trees and flowering shrubs may be transplanted, either to form new plantations or to repair and fill any vacancies in the old ones—such as roses, honeysuckles, jasmines, lilacs, syringas, althæa frutex, shrub cinquefoil, cistus, cytissus, mezereons, &c. In making new plantations of these shrubs, either in clumps or in continuation, let the mode of growth and height of each plant, when full grown, be first considered, that they may be so planted that every one of them may appear conspicuous, and full to the view. Regard must also be had to the distance they should be planted at from each other, some sorts naturally spreading out their branches in a horizontal manner, whilst others have an upright tendency, and not to crowd nor interfere with each other, observing those of low growth should be planted near the front, and the latter sized ones more backward.

LAYERING FLOWERING SHRUBS.—Most of the deciduous trees and shrubs should now be increased by layers. Let the ground be dug round the tree or shrub intended to be layered, then bring down the two-year-old shoots, and peg them securely to the ground with hooked sticks, and cover them with the earth three, four, or five inches deep, according to their different lengths, and, at the expiration of a year, most of them will be well rooted, and ready to be taken off. In order to promote this process, various kinds of the tree tribe and hardy evergreens, such as phillareas, alaternus, laurustinus, &c., can likewise be increased by this method, and many other kinds of foreign plants, which stand the winter here, may be treated in the same manner, as magnolias, rhododendrons, azalias, &c.

PLANTING BULBS.—Those bulbous roots taken up in the summer should now be replanted, such as crocuses, snowdrops, narcissuses, jonquils, &c., in rows, near the edge of the border, or in little patches of five or six inches each. Frittillarias and bulbous irises, ixias, ornithogalums, musk and grape hyacinths, gladioli, and such others as are intended for the common borders may now be planted towards the front, two or three inches deep, in patches of three or four each, allowing three or four feet between each patch; but, if planted in separate beds, they ought to be set in rows eight or nine inches asunder. Different sorts of lilies: Martagons, crown imperials, pancratiums, &c., should be replanted where they are to flower the succeeding summer, placing them forward or backward in the borders, according to their different heights.

TAKING OFF LAYERS AND SUCKERS.—The last year's layers should now be taken from the parent plant, and transplanted, as also many of those which were layered early in the summer. The suckers from lilacs, syringas, and roses, may at this period be carefully dug up, with as much of the root as possible adhering to them, and, after being properly trimmed, they may be permanently planted, or if too small, placed in rows to acquire a larger growth.

FOURTH WEEK IN OCTOBER

AURICULAS.—If the directions given in the last week's operations be attended to, it is all that is necessary at present.

PINKS.—No time should be lost in completing the planting-out of the young stock for next season's blooming. New varieties, if not already provided, should at once be procured, that they may have time to establish themselves. Continue to go over the beds and fasten such plants as are loosened by the worms, by pressing the soil gently to the roots, but do it carefully, if the soil be wet.

CARNATIONS AND PICOTEES will require more attention during heavy rains; they must be sheltered. The glasses, in this case, should be lifted both at back and front, that a free circulation of air may pass over the plants; but at all times when the weather is fine, draw them quite off. Late-rooted layers may still be taken, and if placed under a hand-glass, or in a close frame for a few days, it will facilitate rooting into the fresh soil.

PANSIES.—Search under the foliage of the plants for slugs; they will be doing much mischief at the present time among the young stocks. Finish planting, and secure the old roots, if grown large, by pegging down the long branches, that the wind may not blow them about, and twist them off. Add a little fresh earth where the roots are bare, first moving the surface. Protect the young cuttings in pots from too much moisture by putting them under an elevated handlight, or frame.

DAHLIAS.—The season is now nearly over with the growth of the dahlia, and, if the blooms are not wanted, the roots may be lifted sufficiently to break the small fibres, and stop the circulation of the sap, so that the foliage may dry gradually before finally taking up the roots; for the longer they are left in the ground in safety, the finer they will be. Lifting occasionally exposes the crowns, by dividing the soil. In such cases care should be taken to cover them with a spadeful or two of mould, to protect them from slight frosts, and prevent slugs from secreting themselves between the tubers.

Hyacinths.—Before planting the roots, the surface of the bed should be covered with a thin layer of sandy earth, raked smoothly over it, on which mark out with great regularity the exact situation of each bulb. Round, and under each root, a little clear sand should be placed, which prevents the mould adhering too closely to them. The whole being planted, cover the whole surface of the bed, to the depth of three or four inches, with fine sandy mould, leaving the bed, when finished, about eight inches above the ground, level in front, and fourteen inches behind. In the disposal of the bulbs in the bed, some pains should be taken in mingling the colours, so that they may produce an agreeable and striking contrast.

Evergreens.—All sorts of evergeens may now be removed and planted, that they may take fresh root before frosty weather. Of these, pines, firs, cedars, yews, cypresses, junipers, holtias, and many others may be planted in continued plantations, either with other deciduous trees, or in particular clumps of themselves, or singly, or two or three together on grass lawns, where they make the best appearance; they should be taken up with the roots as entire as possible, freed from all broken, decayed, or straggling fibres, and immediately planted before they become dry, by placing them upright in a hole dug for their reception, shaking the plant to admit the earth between the roots; then fill up the hole, and let the ground be gently trodden down upon the roots; or they may be planted singly near walls, in small clumps, or should any old walls, pales, hedges, or other disagreeable objects, require to be screened or hidden from the sight, laurels, olaternus, pyranauthus, evergreen rignomas, &c., are very proper plants to train and fasten up to them, or they may be suffered to grow in their natural direction where they are not required to reach very high.

Deciduous Flowering Shrubs and Ornamental Trees.—Now is the proper season to begin to plant in shrubberies all sorts of hardy deciduous flowering shrubs, such as roses, guelder roses, lilacs, honeysuckles, &c. Plant also, where wanted, laburnums, syringas frutex, jasmines, privets, double bramble, flowering raspberry, the double-blossom cherry, bladdertina, scorpiontina, spireæs, and hypericum frutex. It is now also a proper time to plant mezereons, the double flowering peach, and almond. In planting the different kinds of flowering shrubs, observe to plant them at such distances and order, that the various different plants, according to their growth, may have full room to grow, and to show themselves to advantage. Where it is intended to plant them in clumps, or any continued plantations in the shrubbery order, let the shrubs, in general, be set at least from three or four, to five or six feet distant from one another, according to the general growth of the different sorts.

Borders and Clumps of Flowering Shrubs.—The borders and clumps of flowering shrubs and plants in the garden should now be thoroughly well cleared of weeds; and also at this time let the shrubs be pruned from rampant and straggling shoots, and let all the dead stalks of flowering plants be cut down close, and clear away dead leaves, and all manner of rubbish. This is also now a proper time to begin to dig the borders and clumps in the garden, which is not only the most effectual method to destroy all remaining weeds, but the ground will then be ready to receive plants of any sort, and it will appear fresh and neat during the winter season.

Perennial Plants.—Continue to transplant into the borders, where they may be required, all herbaceous plants propagated during the season, as they become sufficiently strong; but those which are not now sufficiently stout should be left till spring, for, if they be now planted, they might not be sufficiently established before the winter, unless the autumn should be mild. Those herbaceous plants which may have finished flowering, and overgrown the bounds prescribed for them, may be divided or reduced in size, and planted out where they are to remain.

Pruning Roses.—The proper pruning of roses depends upon two circumstances:—First, the cutting out the dead wood; secondly, the taking off the shoots that are too luxuriant. There will often rise some peculiar shoot, which the root supplies at the expense of the rest of the plant; this should be prevented, either by cutting such shoot entirely away, or so shortening it that it may send out new branches where they are wanted. A small number of very fine flowers is preferable to a large number of indifferent ones. It is, therefore, proper to reduce the number, not when the shrub is about flowering, but by retrenching the branches at this time. For this reason, clear the rose bush of many branches at this time, and let all stragglers be shortened; the dead wood being after this cut out, and the large wood taken away or shortened, the shrub will show itself in its right form. Wherever one branch stands before, behind, or close against another, let it be taken off; when three stand too near, cut out the middle one, and in the same manner proceed through the whole shrub, leaving the boughs at moderate and equal distances. This being done, and the suckers removed, let the earth be dug about the shrub and well broken, and let some good fresh mould be scattered over it half an inch thick. The next year they will be vigorous in their shoots, their leaves well coloured, and they will be handsomely covered with flowers of the finest kind.

FRUIT GARDEN.

FIRST WEEK IN OCTOBER.

THE work now begins with gathering such fruit as has not already been taken indoors, and as the greater part of this is for keeping, too much care cannot be bestowed, for very slight bruises will cause premature decay, beginning at the bruised part. Our own experience tells us that they are best kept, and most conveniently examined, when placed in racks or shelves formed of bars, with straw under and over them. We have tried sand, and packing in boxes and jars, and in no instance have we found the ripening process go on well, nor the fruit of good flavour. The evaporation of part of the moisture, which goes on when air is admitted, is unquestionably beneficial, and by comparison, after taking all the pains we could with all the different modes of keeping, convinced us that the flavour of the fruit suffers considerably by excluding the air from it. We admit that the confined fruit was more plump, but nobody would believe they were the same fruit and off the same tree as those kept openly in the fruit room.

VINES in good seasons have now ripened some of their fruit, if not all. It would be well to protect the fruit from frosts and vermin. Tack in the branches to prevent the wind from blowing them about. The ends of any of the branches intended to bear next year ought to be taken off at the beginning of the month, for it will hasten the wood. Take off also any late shoots, for they can be good for nothing, and only weaken the vine.

RASPBERRY CANES may be pruned, and if the leaves be off, they may be removed and planted also. There ought not to be more than three or four canes left standing at each stool, and these should be shortened down to four feet. Digging between the rows is good for them, whether they be pruned or not. In choosing the plants, observe to take the outside young sucker stems, or occasionally the suckers produced between the main stools, that are of strong growth, all of the last summer's production, not less than two feet, but more eligible if three feet long, with strength in proportion, digging them up with full roots, preferring those with roots the most fibrous, for this is material in those plants, and as sometimes one, two, or more buds appear formed near the bottom of the stem for next summer's shoots, such plants are particularly to be chosen.

STRAWBERRIES. — The strawberry beds require to have all their runners and large yellow leaves cut off, and they should be dug in between the rows. There is no better dressing for anything than the waste of its own growth. New beds or plantations may be made, but they ought not to have been delayed so long.

APRICOTS.—Remove the leaves by degrees, and that as soon as possible; the process is most easy, by drawing a broom slightly and sharply over the trees; the hands can also be made very serviceable for the same purpose; the tree will require to be gone over two or three times.

FIGS must be divested of all their leaves as soon as they are ripe. The pruning may be deferred until the spring; they may be covered up either as they are, or connected and drawn together as a bundle, but this operation may be performed the following month.

CURRANT AND GOOSEBERRY BUSHES.—Dig between currant and gooseberry bushes, and well clear the ground, and if the leaf has fallen, you may begin pruning. November, however, is the better time for that opperation. Cuttings may be taken off for propagation, six inches long, and inserted four inches into the ground in a shady border. They must be cuttings of the present year's growth.

NECTARINES AND PEACHES.—Have the trees freed from all their ripe leaves, which forwards the ripening of the wood. Defer the pruning until the spring.

PLUMS AND CHERRIES. — Plums and cherries planted at this early period of autumn will make new root before the setting in of winter, and will be found to break stronger in spring than such as may be planted later in the season, or even early in the spring.

SECOND WEEK IN OCTOBER.

Pruning Apricots, Nectarines and Peaches.—If the weather has proved so cold and unfavourable as to stop the growth of peach trees, &c., and their leaves are dropping off apace, the operation of pruning and nailing these trees may now be performed, so that the borders may be dug to receive the crops of peas, beans, lettuces, &c., which are intended to be planted in them; but when the season is mild, and the trees appear still in a growing state, it will be proper to defer this operation until November. Previously to the general pruning, it will be necessary to unnail all the smaller branches, in order to examine them before the knife be applied. Let the principal branches be first examined, and if any have advanced a considerable length, and do not support good bearing young shoots, they should be cut out, provided there be proper young wood to supply the vacancy; this being done, proceed to regulate the shoots produced the preceding summer, when those that are weak and trifling, must be cut away entirely, and the others reduced to the distance of three, four, or five inches from each other, which must be trained in a regular order, both below, in the middle, and towards the top of the older branches, so that the whole tree may be furnished with young wood, as on it the principal supply of fruit is to be expected the next year.

Pruning Raspberry Plants.—Observe that all the old stems or bearers that produced the fruit last summer be now cut out, as they never bear but once, and, therefore, a general successional supply of the young sucker stems of last summer must now be selected for next year's bearers, in order to produce fruit. Let all the old stems be cut close to the ground, and select three, four, five, or six of the strongest young shoots, in each main root or stool; let all the rest above that number be cut away close to the surface of the earth, and at the same time let all straggling shoots between the rows be eradicated. Each of the shoots which is left to bear must be shortened about one fourth.

Preparations for Planting Fruit Trees.—This is the proper season to prepare the ground for planting fruit trees. If you have any borders near the wall that want replanting, trench them two feet or thirty inches deep, or as the depth of your soil will allow, picking up all the old roots out of them; manure them with a little soot and lime, and it will be found beneficial to incorporate a little salt with the mixture—add some vegetable mould, of perfectly rotten dung. Let these be well mixed amongst the earth by chopping it fine, then level your border, which should be at least ten or twelve feet broad, and plant your trees any time when it is most convenient in the course of the winter.

Strawberries.—Any time this month new plantations of strawberries may be made. The ground for this purpose should be in an open situation, and the soil of a rich, strong, loamy nature, well enriched with dung and neatly dug up. The ground should then be divided into beds of four feet wide, with alleys between at least eighteen inches. Make choice of the strongest runners in the nursery beds, which may now be transplanted into the newly made beds in rows lengthways, observing to cut off their strings, and not bury their hearts; the larger kinds of strawberry plants should be planted not less than fifteen or eighteen inches apart each way, which will give them room to extend their runners; but for the scarlet sort, a foot is sufficient, and the lesser kinds, as the alpine, may be planted at the same distance.

THIRD WEEK IN OCTOBER.

Gooseberry and Currant Trees.—This is a good season to plant gooseberry and currant trees, when a full plantation is intended. They may be set in rows, at the distance of eight or ten feet asunder, and not less than six feet within the rows; by thus giving them room, the sun and air will have a more free access, the plants will grow without interfering with each other, and the fruit will become much larger and be better ripened. Make choice of young trees raised from cuttings not more than three years old, and of the healthiest and best kind; the plants being ready, prune off all the damaged and broken roots, and be careful not to plant them too deep in the ground. They may also be planted in single rows, near the walls, or form boundaries to the spaces occupied by culinary vegetables, or single rows, twenty or forty feet distant from each other, thereby forming divisions in the kitchen garden; likewise where there are empty spaces along the side of walls, palings, &c; so that a few of them may be disposed towards the south, in order to forward their ripening, and others to the north, to retard it as late as possible, and thus secure a long succession of fruit. These trees should be trained with short stems, so as to branch out near the ground, and planted from six to ten feet asunder, and they will continue to bear for a considerable number of years, with the assistance of proper pruning.

Plum and Cherry Trees.—In the management of these trees at this season of the year, examine, in the first place, the principal branches, and if any be irregular, crowded, decayed or barren of fruit blossoms, they should be cut out or shortened, so as to admit of a fresh supply of prolific young shoots; likewise, if any branches become too long for the proper space, either below or at the upper parts, these should be reduced within bounds, by shortening them to some lower shoot or branch, properly situated, being careful, however, that every branch ends with a leading shoot, and the stump of the old branch should be cut clean out to where the young shoots proceed from.

Gathering Winter Fruits.—Winter pears and apples should, in general, be gathered this month. Some will be fit to take down the beginning of the month, others will not be ready before the middle, or towards the latter end. To know when the fruits have had their full growth, several of them should be tried in different parts of the tree, by turning them gently upward; if they quit the tree easily, it is a sign of maturity, and time to gather them. But none of the more delicate eating pears should be permitted to hang longer on the trees than the middle of this month, especially if the nights be inclinable to frost, for if they be once touched with the frost, it will occasion many of them to rot before they are fit for the table, even if ever so good care be taken of them; and, therefore, on the general principle, let neither apples nor pears remain longer on the trees than the middle, or towards the latter end of this month, for they will get no good after that time.

Sow Kernels and Stones for Stocks.—Stones or kernels of such sorts of fruit as you intend to sow for the purpose of raising stock, may now be sown, either cherry, plum, peach, nectarine or walnut. Make beds three or four feet wide, draw drills about six inches apart, put the nuts in them, and cover them two or three inches deep, or the mould may be raked off the beds to the depth you intend to plant them, and sow the kernels over the surface two or three inches asunder; press them down with the spade flatwise, and spread the earth equally over them.

Melon Beds.—The melons will by this time be over. Take the lights off the frames which are unemployed in protecting lettuce, cauliflowers, or any other kinds of esculent vegetables or flowering plants, and set them in a dry shed till they be wanted.

FOURTH WEEK IN OCTOBER.

Transplant Fruit Trees.—The latter end of this month most sorts of fruit trees may be safely transplanted; but where the soil is not naturally good and rich, it should be prepared accordingly for the reception of the wall or espalier trees intended to be planted therein; but where this has not been done, such ground must be assisted with proper manures. If the soil be strong and of a clayey nature, let it be mixed with sand, ashes, and rotten horse-dung; but if it be, on the contrary, of a sandy kind, some strong rich loam from a common, mixed with cow, hog, or horse-dung, will be a great improvement to such soil, after which the ground should be well trenched two spades deep, well blending the manure with it, and if it has a week or two to settle it is the better. The width of the border thus prepared should be at least the height of the wall, which is commonly ten feet, and this width answers equally for espaliers; but where the ground is naturally rich these auxiliaries will not be required, as the trees will thrive very well without them, though it may not be improper to mix some rotten dung with the earth where the trees are intended to be planted, as this will assist to promote the first growth of the newly planted trees.

Propagation of Gooseberry and Currant Trees. — All the principal kinds of gooseberry and currant trees are propagated in abundance, either by suckers, layers, or cuttings. Many new varieties, particularly of gooseberries, are now raised from seeds; but the most general method of increasing these shrubs is by cuttings, about the end of the month, though it may be performed in any of the winter months when the weather is open. The proper cuttings for planting are young straight shoots of the last summer's growth, chosen from healthy trees of the best bearing kinds; these being cut off the trees, let them be shortened by taking off their tops, so as to remain a foot or fourteen inches each in length; these cuttings are then to be planted in rows about a foot asunder, previously to which all the buds of the lower part of the cuttings should be taken quite off, to prevent too many suckers arising from their bottoms; when thus prepared, plant each cutting about five, six or seven inches deep, according to their length; let them be well closed to the earth, and in the course of the succeeding seasons they will become firmly rooted, putting forth their shoots at the top, and by autumn they may be trained either for common standards, espaliers, or the wall.

Brushing off the Leaves of Wall Trees.—In late seasons, and if the leaves of wall-trees hang longer than usual, they may be brushed off, in order to let in the sun and air the better to ripen the wood. This brushing, however, should be cautiously performed — never brushing much at a time. The leaves should not be forced off violently.

Strawberry Beds.—If it were not done the preceding month, the strawberry beds should be cleared of all superfluous plants and leaves; and if they want moisture, dig in some rich, strong, loamy earth amongst them, with a small spade, and dig the alleys afterwards. If they be wanted, plantations of strawberries may yet be made.

Peach, Nectarine, Fig, &c., for Forcing.—Take care of your peach, nectarine, fig, strawberry, and other plants, which you have in pots, for forcing in the spring. Keep the pots free of weeds, and plunge them in old tan or light mould, which will preserve their roots from the frost.

KITCHEN GARDEN.

FIRST WEEK IN OCTOBER.

General Directions.—All vacant pieces of ground should now be either trenched or dug deep, leaving the surface as rough as possible, or thrown up on long narrow ridges, so that the frost may penetrate through it. The operation of winter fallowing, either by breaking, digging or ridging, is of infinitely more importance to garden ground than all the manure that can be given without it. Clear away all decayed leaves, and dig them into the ground, or carry them to the compost yard for vegetable mould. If a garden be thus laid up in fallow, it will have a neat and orderly appearance during the winter, and will be contemplated with more pleasure by the owner than if left in that state of neglect and confusion in which we generally see kitchen gardens at this season.

Asparagus Beds.—As the asparagus stalks have now done growing, and the seed berries are ripe, they should at any time this month be cut down, and the beds have the proper winter dressing. Let the stalks of the plants be cut down close to the surface of the beds; carry them immediately off the ground, then with a sharp hoe cut up all the weeds, and draw them off the beds into the alleys. Next break up the hardened surface of the beds, with a blunt potato fork, taking care not to disturb the roots. This done, cover the beds two inches thick with old hotbed dung, or dung in a similar state of exhaustion. Next line off the beds; dig the alleys; and as the digging proceeds, cover the dung with about an inch of mould from the alleys.

Beans.—In the early part of this month, plant some beans to come forward as an early crop in the ensuing summer. They will be fit for use by the end of May or the beginning of June. The magazan bean is the best sort for planting at this season, on account of its coming in earlier than any of the other sorts, and although they are of low growth, yet they are plentiful bearers; they also possess the property of standing the winter better than almost any of the other sorts.

Beds of Aromatic Plants.—Now clear the beds of the aromatic plants from weeds, and let them have the winter dressing, particularly beds of sage, savory, thyme, marjoram, and hyssop, and also the beds of mint, balm, tarragon, tansy, camomile, pennyroyal, burnet, and sorrel, and all other beds of aromatics and pot herbs. But the beds of close growing running plants, as mint, peppermint, pennyroyal, and such like creeping rooted herbs, will not well admit of digging: therefore, let the stalks, if any, be cut down close to the ground, then hoe, rake and clear the beds from weeds, and then dig the alleys, and strew some of the earth evenly on the beds.

Brocoli, Savoys, Borecole, &c.—Give now a general hoeing in dry days to the younger late planted brocoli, savoys, coleworts, borecole, &c., and all the young cabbage tribe, both to kill weeds, and to loosen the soil. Now is about the season for laying down brocoli: the tall growing sorts particularly.

Cabbage Plants (Transplanting.)—This month is the proper season for planting out cabbage plants, where they are to remain for cabbaging early in the following summer. If time can be spared, we would advise to trench the ground for this crop.

Carrots should now be lifted and stored for winter use. Choose a dry day for this business, and clean them from the mould, then pare off their tops, so as to prevent them from growing afterwards, to the depth of about half an inch, as by this treatment hey keep the better, and do not get soft in spring.

CAULIFLOWERS.—The cauliflowers sown n August, or the beginning of September, will now be fit to prick out in beds, where hey are to remain during winter. For this purpose prepare a piece of ground in a sheltered, but not shaded situation, of the siz of one or more garden frames, into which set the plants about four inches asunder each way.

CELERY.—As the celery advances in height, let it be carefully earthed up, so that it may be properly blanched and fit for use. Dry days only should be chosen for this purpose. The mould should be rendered as fine as possible, and carefully kept out of the heart of the plants.

ENDIVE.—Plant out the late crop of young endive the beginning of this mouth, in a warm, dry south border, for late winter and spring supply.

LETTUCE.—The lettuce plants raised from the seeds sown in August, or beginning of September, will now be strong plants. These should now be planted out where they are to remain during winter. A dry, sheltered, warm border should be prepared for them, into which they should be planted six or eight inches apart.

PARSNIPS.—Parsnips should now be lifted and stored, either as directed for carrots, or for want of room, may be pitted in dry sandy earth, in the same manner as generally practised for potatoes.

SMALL SALADS.—Chervil and cresses may still be sown; the sooner now, however, the better, that they may get established before the winter sets in. After this period, such salads must be produced in pits and frames. At the bottom of a south wall sow a supply of Normandy, or curled cress. It will, with little protection, afford a fine salad during winter, and come in early in the spring.

WINTER SPINACH.—Winter spinach must now be kept clear from weeds. These plants are, at this season, best cleared by hand; particularly where there is chickweed, and such like running seeds. Where the spinach was not properly thinned last month, let that work now be done in a proper manner.

SECOND WEEK IN OCTOBER.

AROMATIC HERBS.—Clear all the beds of aromatic herbs from weeds, and let them have now their winter dressing. This must be particularly observed in the beds of sago, savory, thyme, marjoram, and hyssop, and also the beds of mint, balm, tarragon, tansy, camomile, pennyroyal, burnet and sorrel, and all other beds of aromatic and potherbs. These are now to be treated in the following manner. Cut down all the decayed flower stems, close to the head of the plants, or to the surface of the ground, according to the nature or growth of the different sorts, and at the same time clear the beds very well from weeds and litter, and carry the whole off the ground. After this it would be proper, where the plants stand at a distance from one another, to lightly dig or loosen the ground between them, or in old beds it would be a great advantage to obtain some very rotten dung, and let it be broken small, then spread a sprinkling of it equally over the surface of all the beds; however, where there is room, as above, having a small spade or trowel, dig lightly between such of the plants as will admit, taking care, if any be manured, to bury the manure a little depth in the ground, and at the same time, if they be in beds with alleys between, dig the alleys, spreading a little of the loose earth upon the bed, leaving the edges full and straight. But the beds of close growing running plants, as mint, peppermint, and pennyroyal, and such like creeping rooted herbs, will not well admit of digging; therefore, let the stalks, if any, be cut down close to the ground; then hoe, rake, and clear the weeds, and then dig the alleys, and strew some of the earth evenly on the beds. This will both give a general neatness, and protect the mints; and the rains will wash in the virtue of the earth which was thrown out of the alley, and the whole will greatly enrich the beds, and strengthen the roots, and in the spring the plants will rise with vigour.

ASPARAGUS.—If the stalks of the asparagus have not been cut down, now is the best time to do it. This is also a proper time to save the seed. When the stalks are all cleared away, hoe the beds and rake off the weeds clean, then lay a layer of rotten dung in the beds, and dig as much earth out of the alleys as will cover the dung about three or four inches deep.

BEET.—About the middle of this month the crops of red beet should be taken up, and be stored for winter use.

BROCOLI.—The crops of brocoli should now be cleared from weeds, and about the middle of the month they should be finally moulded up for the winter, observing to choose a dry day for the operation. Treat the crops of Brussels sprouts in like manner. The most forward crops of brocoli, especially of the tall growing kind, should now be lifted, and laid over on their sides.

CABBAGE PLANTS.—A number of cabbage plants may now be planted out for good in a well exposed spot of good soil, the ground being previously dug and manured; these plants, if they weather the winter, and which they will do if not very severe, indeed, will come in very early and acceptably in spring. In order to have a better chance of obtaining a crop, and also a succession of spring greens, they may be planted at fifteen inches between the rows, and at eight or more inches in a line. In March or April every second one in the lines may be cut out for use, and the others will then have sufficient room to come to full size.

CARROTS.—A little carrot seed may be sown the first or second week in this month, in a warm border.

CAULIFLOWER PLANTS.—If the weather were so cold in September as to retard the growth of the cauliflower plants intended for the frames, so as to render them too small to be pricked out early in this month, it will be very eligible to plant some of them in a slight hotbed, which need not be made above a foot or fifteen inches thick of dung, covered with about six inches of good rich earth, and in this prick out the plants, where they will soon take root, gather strength, and thus be able to withstand the rigours of winter.

CELERY.—Take the opportunity of dry weather to earth up the celery as it advances in height, before the frost sets in; let the earth be well broken, and bank it up to the plants carefully, so as not to bury the hearts, nor break the outer leaves.

CARDOONS should be banked up in dry weather to their full height, after having regularly gathered up the leaves, and tied them round with a hayband; the earth requires to be well broken, and banked up all round the plant, and beaten with the spade to smoothen the ground, so that the rain may pass easily off.

ENDIVE.—In order to have a supply of these plants as long as the weather will permit, the plants of the last sowing should be transplanted under warm walls, pales, or hedges, to keep them from the frost, and if the winter should prove severe they ought to be covered with some pea haulm, or other such light covering, which must be constantly taken away in mild weather. The tying up the plants for blanching is only to be understood for the two first sowings, for the plants of the latter sowings should be taken up on a very dry day, and with a large flat-pointed dibble. They must be planted in the sides by trenches laid very upright, sideways towards the sun, with the tops of the plants only out of the ground, so that the hasty rains may run off, and the plants be kept dry and secured f frost.

LETTUCE.—Plant out on warm bor lettuce plants to stand the winter. green ones, Silesia, and cabbage lettuces reckoned amongst the hardiest sorts, bu severe winters are apt to destroy the hardy kinds of lettuce, it is better to ha reserve in frames.

MUSHROOM BEDS.—The mushroom which were half planted with spawn they become cool enough, should now finished. Set the spawn into the surfac the bed, in little pieces about three inc apart, then cover the bed about two or th inches thick with rich loamy earth, and m it firm, that the spawn may have a steady stance to run in, and produce the fruit tc used.

PARSLEY.—If hard frosts begin to c on without snow, lay some light dry lit such as fern, on your rows of parsley. will be the means of preventing the f from destroying the leaves of it.

RADISHES.—Queen or turnip rooted radi may yet be sown to succeed those sown month and in August. If a few of the I don short-topped radish were now sown, t might perhaps come in about Christmas.

SAVOYS.—This is one of the most us of winter vegetables, and the last crop sh be planted about the beginning of this mo: but should the weather remain open, the planting may be postponed till the mi of the month at latest. These plants cabbage about Christmas, and prove an cellent supply of greens for the table du the winter.

THIRD WEEK IN OCTOBER.

ARTICHOKES.—About the middle or la end of this month some dry litter, suc straw, or leaves, or fern, should be put ro the stem of each plant. In this operat however, the gardener must be enti guided by the weather.

ASPARAGUS BEDS.—Preparations m now be made to protect the seedling bed asparagus from frost. The stalks must be cut down, and the beds covered wit scattering of fresh mould, and anothe rotten dung. If the succeeding season pr very severe, there must be some dry st spread over them, and, when it is milder, covering may be taken off.

CABBAGE PLANTS.—It will be prope have some plants in a warm situation served, lest the frost should destroy tl which are planted out for good; or if an those now planted out run up to seed in

;, which is frequently the case in mild is, or when the seed is sown too early, may have a supply of plants to make good.

RROTS.—About the middle of this month, latter end, according to the season, s may be taken up and stored by for r use. A dry day should be chosen for purpose, and the drier the roots are, ously to being packed by for winter and g use, the better; the mould also will uch better cleared from them when the is dry than when it is the reverse. e are various ways of preserving carrots; est, according to our judgment, is to them amongst dry sand in a dry cellar, be next best is that of burying them in like potatoes. Some persons cut off the of carrots entirely, including also a thin on of the top or crown of the root, in to prevent all future growth. Carrots been known to keep for two years, ctly fresh and fit for use, by simply ing them in pits, like potatoes.

.ULIFLOWERS.—About the middle of the h the cauliflower plants should be transed into the places where they are to e the winter, some of which should be under bell or hand-glasses, observing to two plants under each glass; because, e of them should fail, the other will be cient, for in the spring, if they both live ugh the winter, one plant must be transted out. The ground for this early bell and-glass crop of cauliflowers should be and light, in a warm situation, and re water is not apt to stand and stagnate inter. Let some good rotten dung be ad over the place, and then let the ground lug one spade deep, and well broken, ng care to bury the dung regularly; then k out the ground into beds three feet , and allow alleys a foot wide between beds, for the convenience of going in to off, and put on, or raise the glasses. Let line along the middle of the bed be from end to the other, and at every three feet a half mark the places for the glasses, for each glass put in three or four more ts towards the middle, and within four es of each other, and close the earth well it the roots and stems; then give them a moderate watering, just to settle the h to the roots. When the whole is ted bring the hand or bell-glasses, and them ready, observing to place one glass r each patch of plants, as above.

ELERY.—Celery should continue to be earthed up, as it advances in height, in r that the plants may be well blanched in proper length before severe frosts attack them.

ENDIVE.—Continue every week to tie up some full-grown endive plants for blanching. Choose a dry day for this purpose, observing always to make choice of such plants as are quite, or nearly full-grown. Let the leaves be gathered up regularly, and close in the hand, and then, with a piece of strong bass, tie them neatly together. Plant out the late crop of young endive about the middle of this month, if not done in September, in a warm dry south border, for late winter and spring supply.

LETTUCES.—Continue to plant out lettuces in beds of rich light earth, in a sheltered situation, six or eight inches asunder; they will supply the table before and after Christmas. Lettuce plants intended to remain where sown, for winter use, should now be cleared from weeds, and thinned where too close. The cos and other lettuces, which were so sown in the middle of September, to be planted in frames or under hand-glasses, and in warm borders, to stand the winter for spring use, and to plant out in that season for an early summer crop, should now be transplanted into the places where they are to remain all winter.

PARSNIPS.—The parsnip, although, like the carrot, a native of this country, is not so liable to be injured by frost, and, therefore, it is often left in the ground all winter.

SMALL SALADING.—If a constant supply of small salading be wanted, you must now begin to sow it in pots. Take pots, and fill them within an inch of the top, after being pressed down, with perfectly rotten fine tan or vegetable mould; sow the seeds thickly, and cover them lightly, half an inch deep; set them in frames or in a hothouse, and the plants will come up and be fit for use, without giving them any water.

TURNIP TOPS.—This may be considered as the first of the spring vegetables. It would be advisable to plant some roots now about a foot apart, the sprouts of which form a most wholesome vegetable in the spring.

WINTER SPINACH.—Winter spinach must now be kept free of weeds. These plants are at this season best cleared by hand, particularly where there is chickweed and such-like spreading or running weeds. Where the spinach was not properly thinned last month, let that be now done in a proper manner, and do it about the middle of the month.

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FOURTH WEEK IN OCTOBER.

GENERAL DIRECTIONS.—Such patches of kitchen garden ground which are now vacant should, where intended, be manured, and also dug or trenched, so that it may have the full advantage of fallow from the sun and air in the winter season; but in digging or trenching these pieces of ground, which are to lie fallow till the spring, observe each trench should be turned up in a single ridge lengthways, for by laying the ground in this form, it not only lies much drier, but also the frost, sun, and air can have access more freely, to mellow and enrich it, than if it lay level; and in the spring, when you want to sow or plant, the ridges are soon levelled down, and the soil thereby also greatly ameliorated. Such compartments of ground as are occasionally to be manured should previously have the manure spread evenly over the surface, and then should be equally buried a spade deep, not more, in the bottom of each trench, as you advance in digging. This is a good season for collecting the different soils which may be required for the spring and summer crops, and also for gathering all kinds of litter which may be necessary for protection against frosts. Every part of the garden must now be kept clean and neat, all useless rubbish removed, the compost heaps regularly turned, and the gravel walks cleared of weeds.

Artichokes.—Continue to protect the roots in severe weather with pea-haulm or litter.

Asparagus for Winter Use.—Where forced asparagus is required for use in winter, hotbeds may now be made for raising the first crops for gathering in November and December. If a constant succession be required all winter and spring, a new hotbed, planted with fresh plants, must be made every three or four weeks, from the middle or end of October to the end of February or March, which will furnish a constant supply of asparagus from November till the arrival of the natural crops in the open ground in April or May.

Beans.—The latter end of this month some beans may be sown for an early crop the succeeding summer. Those which are sown now, if they survive the winter's frost, will come in for use in May, or in June. The magazan beans are the best to plant at this season, for they will come earlier than any other, and are excellent bearers, though but of humble growth, and will stand the winter better than the larger sorts.

Beet.—Take up red beet, and store it for winter use. As the roots will bleed at every wound, lift them carefully on a dry day.

Carrots, Parsnips, &c.—These esculent roots, which were sown in the spring, will now be arrived at their full growth, and should, therefore, be taken up, and preserved in dry sand, to protect them from the frost.

Cauliflowers.—Cauliflower plants which were planted in frames the last month, to forward them for transplanting the latter end of this month, under bell or hand-glasses, must be constantly uncovered night and day for the greater part of this month, unless the weather should prove very wet and cold; then, in that case, put the glasses on every night, and even in the daytime during the time of heavy rains, but let the plants at such times have air, by setting up the lights considerably behind.

Celery.—Continue to earth up the celery. If the earth thrown out of the trench has been already used, the spaces between the rows are to be dug up, and their soil employed for the purpose; but this is sometimes so damp that it either rots the plants from its wet, or gives the frost too much power to destroy them, the effects of frost being always greater when the ground is moist. In order to remedy this evil, spread over the ground that is to be dug half an inch thickness of clean river sand; over this sprinkle a little brine, made of common salt and pond water. Let it be three days, and then begin digging. Mix in the sand as you dig, and break the earth very carefully. Let it be thus two days more, to dry after the breaking, and then draw it up about the plants.

Clearing and Dressing Beds of Herbs—The beds of mint, balm, tansy, sorrel pansey, penny royal, &c., should have their stalks cut down to the ground, weeds cleared off, and the alleys dug up.

Hyssop, Marjoram, Savory, Thyme.—These herbs should now have their flower stalks cut down, clearing the plants of al weeds or other litter, and, where there i room between them, let the ground be well stirred with the fork, and some rotten dung be worked into it, the alleys dug up, and the whole rendered neat for the winter.

Leeks.—Stir the earth about the leeks, and draw up the earth about the stems; observ if any of the plants be diseased, and if so take them up, as no benefit will be derived from them.

Lettuce.—Continue the same operation as previously recommended.

Parsley.—If hard frosts begin to com on without snow, lay some light dry litter such as fern or straw, over the rows o parsley.

Peas.—A first moderate crop of early pea may now be sown, to have the chance of a early production the ensuing summer, i May or June. The earliest hotspurs are th proper sorts of peas to be sown at this time

Choose such seeds as are new, plump, and sound. There are several sorts of the hotspurs, such as the golden, the Charlton, the Reading, the master, &c.; all very good peas, and plentiful bearers, and produce handsome sized pods, well-filled, and of which the Reading, master, and hotspurs are the largest, but not quite so early as the others, and, therefore, either the Charlton, golden, and a variety called Nichol's early golden, are generally preferable to be sown for the first early crops. A warm south border, under a wall or other fence, is the proper situation, and in which the peas must be sown in drills about an inch and a half deep, either lengthways or across the border, according to its width; if but narrow, have only one drill lengthways, one or two feet from the wall; sow them moderately thick and regular, and earth them over not more than an inch and a half; but where the border is four, five, six, eight, or ten feet broad, it will be proper to have the drills crossways.

Radishes.—Radishes may still be sown in warm borders; perhaps they may stand the winter by laying fern or straw over them in frosty weather, and if they do, they will come in early in spring.

Small Salading.—Sow the seeds of cress, mustard, rape, and radish, for small salad, once a fortnight, making choice of a warm situation, and throwing in the seeds pretty thickly in drills about two inches asunder, and lightly covered with fine mould or sifted rotten tan. If the weather should be cold or wet, place a frame or glasses over the drills, otherwise they may be freely exposed to the sun and air.

ON THE CULTIVATION OF THE FUCHSIA.

This beautiful tribe of plants is become a general favourite among all classes of society. More than twenty species may be obtained at the nurseries, of which six are perfectly hardy, viz. — Fuchsia coccinea, gracilis, tenella, virgata, conica, and macrostemon.

The F. lycioides, excorticata, microphylla, parviflora, arborea, &c., require a greenhouse or frame. The only one which requires the stove, is the venusta, or beautiful. It was introduced from Mexico in 1825.

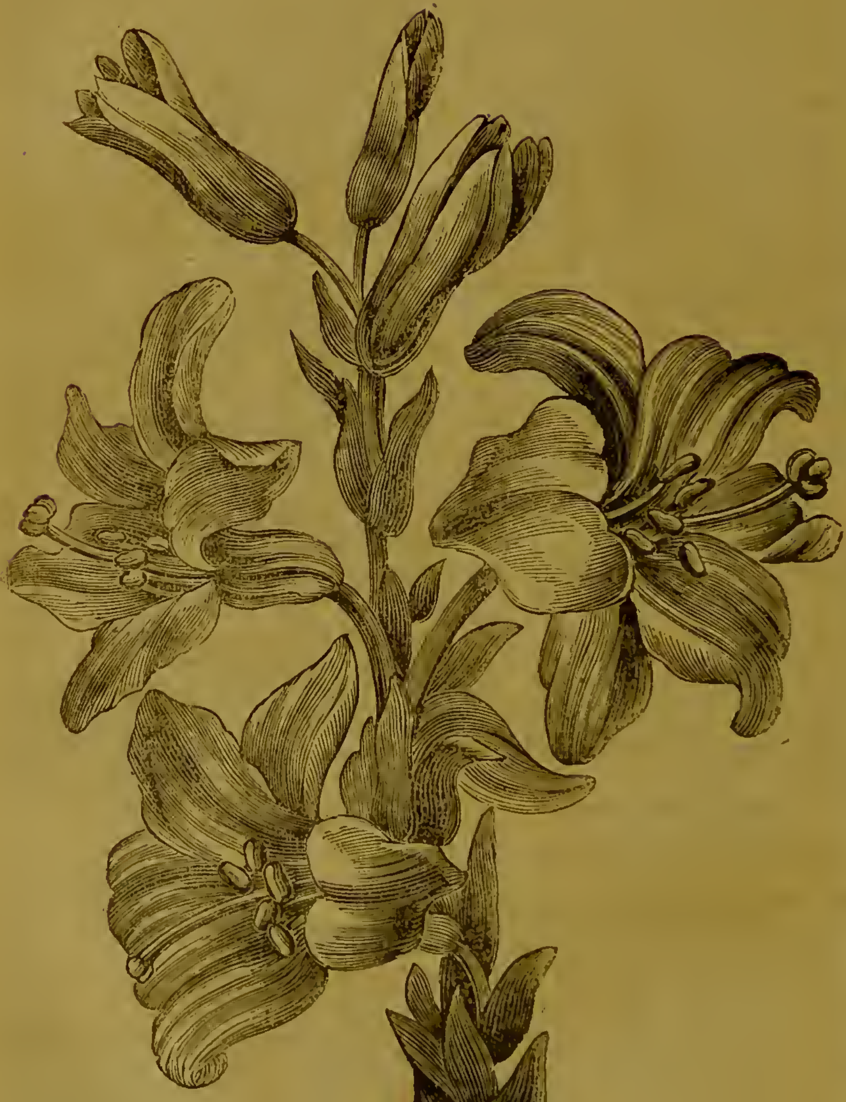
The fuchsia is easily raised from cuttings, and by seeds for new varieties. Take off in October well ripened cuttings, with two joints, plant them in pans of light sandy loam, and a bell-glass over them; then plunge them in a gentle heat, and keep them free from decayed leaves, and in three or four weeks they will have struck root; when this is the case, let them be potted out. Place each plant in a 60-sized pot, with as good a sized ball as can be obtained, then fill the pots with a mixture of rich loam and peat, in about equal proportions; replace them in the hotbed, and keep the temperature to about sixty degrees Fahr., until they have started growing again. About the end of April they will require re-potting; after which, those intended for the open border should be hardened by degrees,—removing them, first to the greenhouse, next to the frame, and eventually to a warm situation out of doors. If this be properly attended to, they will receive little or no check from the effects of the change of climate.

In propagating by seed, take it when well dried, and sow it in pans of light sandy loam; place it in a gentle hotbed, and give gentle waterings until the plants appear; when they have attained three or four leaves, transplant them into thumb pots, and treat them in the same manner as recommended for rooted cuttings.

After the plants have been a summer in the open ground, and are cut off by frost in the winter, the best preservation is, to cut them down even with the ground, and turn a pot or box, filled with leaves, over them, drawing the earth a little round the pot, and the plants, if kept dry, will receive no injury in the most severe winters.

In the spring following they will put up ten or twelve stems, all of which, except three or four of the strongest, should be pinched off; by this method I have had the F. gracilis to grow as high as eight feet in the course of the summer, and the other species in like proportion.—*Delta.*

Sweetwilliams.—The *Dianthus barbatus* or sweetwilliam, is an old and well-known inhabitant of our garden, and was much esteemed many years ago. The seed should be sown in May with the other biennials. Prepare a bed of light earth sufficiently large to hold the number of plants required. Sow the seed and cover it lightly, keeping it clear from weeds during the summer. Early in August the plants may be removed, and planted in the places where they are intended to flower; or if it be not convenient to remove them in August, they may remain in the seedling bed until the arrangements be made in the spring. This mode of treatment will answer for all the species and varieties of similar habits to the sweet-william, as *aggregatus, latifolius, &c.*



THE STRIPED LILY.—*See p.* 306.

THE AZALEA.—*See p.* 315

THE STRIPED LILY.

The striped lily is a very fine and fragrant flower, with all the qualities of the common white lily, viz , stately growth, abundance of bloom, and most consummate fragrance, with the advantages of a variegation in point of colouring, much in character with the natural flower, very delicate and beautiful.

Late authors have been taught to call it, after Marchant, Lilium album flore lineis purpureis variegata, "the white lily with the flower variegated with purple lines." Linnæus, however, who disregarded such variations in his account of species, referred it to the original plant, the common white lily, which he distinguished from the others of the lily kind by the addition of Foliis sparsis, corollis, campanulatis, intus glabris, "lily with scrolled leaves, with bell-shaped flowers, smooth within." The scattered disposition of the leaves, and the bell-shape of the flowers distinguish it from the Martagons, and the smoothness of the inner surface of the petals, from the red kinds, which have protuberant marks.

It is a native of the East, and thrives in a rich soil, where there is open air and some moisture. This elegant variety of it has been the result of accident amongst frequent sowings.

The flower in this striped state ripens its seed freely, and affords offsets as plentifully as in the simple state, and it may be increased and propagated from them. The method by offsets, like all the bulbous kinds, is very easy. When the leaves are decayed after the season of flowering, the roots must be taken up, and at that time in the perfect manner of culture, we recommend the adoption of two beds, dug up, one in the garden, the other in the nursery; that in the garden is for the reception of the old roots again, and it may either be in the same spot, with change of mould, or any other; that in the nursery is for receiving the offsets, and nourishing them till they are of a size to flower strongly.

The offsets being all taken off, must be planted at eight inches distance in the nursery beds, and covered an inch with the mould; the old roots should be allowed fifteen inches distance every way.

Some take up the roots only once in every three years, but the right practice is to do it every year; this practice not only affords more offsets for propagation, but the old roots flower much more strongly from being cleared of them.

They are to be planted again as soon as cleared from these, for the scaly bulbs do not bear, like the tunicated or solid, to be kept out of the ground. There needs no compost to be made for them, for they succeed very well in garden mould.

When the offsets have stood in the nursery beds till they flower strongly, they are to be brought into the garden and treated just as the others.

Such is the method of increasing the striped lily by offsets, and thus it will retain its nature, but the elegance of colouring and the variation are only to be continued, as the flower first was raised, by a careful sowing of the seeds. For this purpose let a good plant be marked for seed, and encouraged to ripen them perfectly, by suffering only the first three flowers which open to remain, and by frequent watering and breaking of the soil. Let the stalk be tied up to a firm stake to prevent all accidents from the winds, and when the seed vessels are tolerably hardened upon the plant, let them be taken off, and laid for a fortnight upon a prepared shelf, turning them every day. Then open them, take out the seeds, spread them upon the shelf, and air them ten days; at the end of this time they will be fit for sowing. Dig out a piece of ground in a part of the nursery that is well sheltered, but open to the morning sun. Fill up the place with fresh mould, taken from under the turf in a rich pasture, and scatter in the seeds. Sift over them a finger's breadth of the same pasture mould, and lay a thorn bush upon the beds to keep off the intrusion of animals, and other accidents. Let all weeds be picked off as they appear, and when the plants come up, let them be thinned, if they rise in any part too closely, and from this time carefully watered. If they be exposed to the noon sun, let the bed be sheltered by a reed hedge. In the beginning of August, let a large bed of the same earth be prepared, and let the mould be taken off the surface of the seed-bed so deep as to take up all the roots. Let the earth with the roots in it, for they are too small to plant separately, be spread carefully over the surface of the new bed, and sift over it half an inch more mould. In severe weather cover it with a coat of pea-straw, and in spring stir the surface very lightly and gently, so as not to disturb the roots, and sift on a quarter of an inch more of the mould. The leaves will soon appear, and the bed must be carefully weeded, and well watered in dry seasons, a little at a time, but often repeated. In the September following, make up a large bed, and separate the roots by sifting the mould of the first bed. Plant them in this bed four inches distant, with the heads upwards, and sift over them more mould till they are covered half an inch. The second year after their removal they will flower, and there will be found an elegant variety, as a great quantity of the seed of the common white lily would have a chance to raise some striped flowers, so there probably will be from the seed of the striped some white ones; but the striped ones will be very numerous, and there will be amongst them a great deal of variation. The stripes will be broader and larger in some, paler and slighter in others, and they will in some flowers ramble over the whole petals with a very rich and pleasing variegation.

These roots are to be managed as we have before directed, when treating of raising the plants from offsets; they must be taken up every year, the offsets must be carefully removed, and planted at four inches distance in a nursery bed to gather strength; the grown root thus cleared must be planted again as at first, only in fresh mould.

ARRANGEMENT OF FLOWER GARDENS.

About fifteen years ago the rage commenced for having each clump filled with one sort of plant; the gardener, of course, had no objection to this new species of arrangement, because he could see that it would not be near so much trouble to him as the old plan. The beds once filled, the summer's labours were at an end; such beds, however, gave to the flower garden an appearance not unlike that exhibited by one of General Evans's Legion men on their return from Spain. The old coats of these worthies had once been red, but they were then amply patched with yellow, blue, green, black, &c., and were bare and thin; such is a Dutch flower-garden. The fault generally committed in forming a mixed flower-garden or border, is planting too thickly; the plants ought to stand not less than three feet apart; the roots and foliage would then be clear of those of their neighbours, and room would be afforded for winter manuring and digging. In planting clumps, the plants should range nicely, the highest being in the centre; and in borders they should gradually rise from front to back. It is sometimes necessary to lift the plants altogether, and re-arrange them, and this gives an opportunity of trenching and deepening the soil. It was no doubt the bad arrangement that prevailed in clumps and borders, that brought about the present system of flower-gardening. If the above arrangements were carried out properly, and the herbaceous plants placed at proper distances apart, there would be plenty of room for introducing verbenas, petunias, calceolarias, scarlet geraniums &c., between them in May. These latter, would form little clumps of themselves, quite large enough to render the bed gay and interesting, without the pain to the eye attendant upon looking on a large mass of bright colours. The flower-gardens now-a-days may be compared to regiments formed into squares, producing a gaudy effect a mile off, but formal, stiff, and tame near at hand. As respects annuals, they are entirely mismanaged; a hundred are allowed to come up in a square foot, and there they remain to bloom, becoming mildewed for want of air and sun, and the roots fighting and gasping for food. They are strangled below ground as well as above. Can fine blossoms be expected under such management?—or can they last long in flower?—*J. Cuthill.*

CULTIVATION OF VERBENAS.

The following simple and certain mode of succeeding in the culture of that beautiful border plant, the verbena, is given by her Majesty's gardener, Mr. George Wyness, whose success as a raiser of novelties of first-rate character in this class of flowers is well-known in the floricultural world. It is as follows:—Extracted from "Beck's Florist," of January.—"I do not know," says Mr. G. Wyness, "whether my system of propagating this favourite be new, but as it is simple, certain, and expeditious, it may be as well to state how I proceed from the commencement. I fill shallow pans (such as are used for placing under flower-pots), to within a quarter of an inch of the top with silver sand, and pour water in sufficient to cover the sand. I then make the cuttings in the usual way, and push them into the wet sand, put the labels to them, and place them in a hotbed frame, where the heat ranges from 65 to 70 degrees, always keeping the sand wet. The advantages to be realised by propagating verbenas in this way are, that the cuttings never require to be shaded in the brightest sunshine; consequently, the young plants are not drawn up long and lanky, the cuttings never stop growing from the time they are put in, until they are ready to pot off, which is about six or seven days, when they may be drawn out of the wet sand with a bunch of roots, without injuring a single fibre."

INSTRUCTIONS IN THE ART OF HYBRIDIZING.

In bringing before the notice of our readers the interesting art of hybridizing, we have to remind them that nothing should be done without a meaning as clear as the sun at noonday; nothing should be attempted without an object, that object being the improvement of one or other of the flowers on which we are at work. Now the only points to be gained by hybridizing are, first, to obtain the properties or qualities of a tender plant upon a hardy one, or the flowers or colours of an ill-habited plant upon one of good habit. Generally speaking, these two points comprise all that can be gained; but there may be another object, which is only comprised in those mentioned by implication, the mixture of colour between plants of equal or nearly equal claims. The first of these objects is important, and has been accomplished to a great extent in the rhododendron. The difficulties attending this operation with many flowers are, first, its species flowering at different seasons; secondly, their flowering in different places, for there are certain rules to be observed, without which failure is certain. The pistil of the female plant, or rather the plant that is to bear the seed, has to be impregnated with the pollen or farina of the male plant, or the one which is required to impart the desired property, and this requires some nicety. First, the seed-bearing plant must be watched, and, as soon as the flowers open, the stamens which hold the powder and pollen must be taken out by small tweezers before they burst; indeed, as soon as they can be got hold of; this secures the pistil from being impregnated by the flower itself. The next is to observe from hour to hour, or from day to day, and as soon as the top of the pistil is glutinous, it is ready for the operation, and at that time the pollen must be applied; consequently, provision must be made for it, by forcing or retarding the other plant, so that the pollen shall be ready at the time. One thing is most certain, if the pollen be not ready, there is not any hope, but if it be ready beforehand, it is possible to keep it. We have carried it a hundred miles, and kept it some days, yet it has answered; but how long it could be kept has not yet been proved. It has been said that it could be carried a long voyage, and even then be efficacious. In the case of a rhododendron maximum, which being impregnated with a R. arboreum, the latter was in bloom three weeks before the former, yet every stage of the process proved, as well as the result did, that the operation had perfectly succeeded. The plan we adopted, was to cut out the point or end of the pistil directly the flower opened, and as the pollen vessels burst, we gathered the single flowers from the bunch, and placed the stalk in water in one of the holes of a pansy stand, covering it with a wine glass, which completely excluded the air, as we flooded the surface, that the edge might stand in water. This we did with each bloom as the pollen appeared, so that before one plant was ready to receive impregnation, we had all the flowers of the arborea off the bunch some days. The flowers had almost perished, the farina had fallen to the bottoms of the cups, and we took it out with a camel's hair pencil, and applied it to the pistils of the hardy plant which had been accelerated all we could by protecting with glass. This merely proves that the pollen might be brought from great distances, if done with care, and some persons speculate in its keeping as well as seed; this may be tried; our business is to tell what we know, and not to speculate on what may be done, but as opportunities of procuring flowers offer frequently, they need not be lost, and our opinion is that flowers picked in the usual way and shut in a book might be preserved some days in sufficient order to perform the operation.

The mode of performing the operation having been described in part, we have merely to add that some flowers are much more difficult to hybridize than others, and that unless they are caught at the moment the pistil is glutinous, they will be crossed by some other flower or by themselves. The instances of hybridizing in various flowers will be recognised in many families, but in none more so than in the family we have mentioned; for in that the operation has been successfully performed by the bright yellow Azalea sinensis, which is deciduous, upon the rhododendron, which is evergreen, and here there is something worth trying for. The term has been generally applied to the crossing of species, but the cross breeding of flowers for the improvement of their properties is carried on to a great extent, as is evident from the pansy, the rose, the mimulus, phlox, verbena, pink, carnation, tulip, auricula, fuchsia, and many other subjects, and those who well perform it, instead of leaving it to nature, may, generally speaking, calculate upon a result with more certainty. The first object with a plant is to sow seed from the best habit. With a flower we should select the best form and texture, and it is only when two flowers are distinguished for equal, though different, good qualities that we can recommend both to be crossed; for here the chances are that both will yield improvements, but where the form of a flower or the habit of a plant is bad, and the mere colour or size is the object to obtain seed, only the plant of good habit, or the flower of good form and texture. In hybridising or breeding the pansy, seed from a round, thick, smooth flower. In tulips, seed from a pure yellow or pure white ground, with a thick, smooth, flat ended petal, that forms the most even-edged cup, and the rounder the better. In a rose, take the thick, well imbricated petal, that opens freely. In a verbena, take the roundest flower, the freest from notch or serrature, and the most stiff petal. In petunias, seek for the thick, round flower with the flattest tip. In auriculas, look for the flattest, roundest flower with the smoothest petal, the smallest tube, and the evenest divided colours; for the widths of the white colours and edge ought to be alike. In the ranunculus, which has been produced all but, if not quite perfect, look for the semi-double varieties that are nearest to double, with bright, broad, thick, smooth petals, and let the pollen you apply come from flowers which are desirable on account of colour, nor does it matter what flower it is; all that has to be done is to select that which is most desirable for form and texture, as the seed bearer, and that which is most conspicuous for colour and size. The fuchsia fulgens was the means of deteriorating the whole race of fuchsias, and the benefit of crossing was hardly felt for years. The coarseness of all the novelties was proverbial, not because pains were taken to hybridize, but because fulgens happened to be a free seeder, whilst the more elegant species were very shy seed bearers; and florists merely sowed the seeds from the former because it grew to their hands. Since this, people have been more careful, and the fuchsia is rapidly improving. It is curious that the very seed pods of flowers frequently change character; those in the habit of coming small often come large, and seeing these, we have a curious field for speculation, in the adaptation of the principle to fruit. For instance, by impregnating fruit for the purpose of observing whether there be any distinct alteration in the form or flavour of the produce the same year, not that it would indicate exactly the kind of fruit that the seed therein would produce, but that it might make a difference in the fruit, as it often does in the seed pod, we know there is a difference produced in the seedling fruit that comes afterwards from the seed of the fruit impregnated.

HOW TO FORM THE TREE MIGNONETTE.

In the month of March sow a few seeds of the common mignonette (Reseda odorata) in pots of five inches width by seven deep, filled with rich sandy loam; place them in a melon or cucumber frame, were there is a good moist heat; when they have made about four leaves, pull out all but one strong plant in each pot; as it grows, pick off all the side shoots, leaving the leaf at tho bottom of each shoot to carry nourishment to the stem. When the plant is drawn up by plenty of heat and moisture to the height of about eleven inches, it will show its blossom, which must be nipped off: leave it about a week longer in the melon frame, taking care to nip off all side shoots, then remove it into the greenhouse, where it should have less water, but plenty of air; let it be carefully tied to a thin stick with bass; after a short time it will begin to send out another shoot from near the top, which must be led up to the stick, and all side shoots again nipped off, but the bottom leaves again left to strengthen the stem; by this means it will be about eighteen inches high; the bloom may be cut off, and the plant kept in the greenhouse; in the autumn it will put forth plenty of shoots from the top, and make a handsome bush, and will come into flower early in February or March, according to the heat in which it may have been kept.

By this means we are enabled to gather mignonette for bouquets in the spring, and the samo plants, by being cut, send forth fresh shoots which flower all the summer.

Salsafy.—Salsafy is a hardy biennial plant, with a long white fleshy eatable root for boiling, raised from seed in the spring; the plants remain where sown and are thinned; they shoot at top with long narrow leaves, and the roots run down long and straight, attaining full growth in autumn, for use in that season and during tho winter, and in the spring the one year old plants shoot up with thick fleshy stalks; these are gathered sometimes young to boil, and eaten like asparagus; the roots also to boil. Sow the seed, a small or moderate crop, in March and April, in an open situation, either broadcast or in small drills, six or eight inches distance, and when the plants are up two or three inches, thin them half a foot apart; they continue in growth till October.

OUR NATIVE FLOWERS.

Perhaps not one of our readers would dissent from the proposition that beauty, not rarity, is the first quality to be desired in the tenants of our parterres; and for ourselves, we have no hesitation in saying that that gardener should not have the direction of our flower-borders who rejected the beautiful, because it was common, to make room for the more insignificant, merely because it was scarce. No, we prefer, before all other considerations, beauty of colour, beauty of form, and excellence of fragrance. Moreover, we are not of those who admire most that which costs most—but, on the contrary, we should be best delighted to save every guinea we could from being expended upon the tenants of our outdoor departments, in order that we might have that guinea to spare upon our stove and greenhouse, the denizens in which must, beyond doubt, be excellent in proportion to their costliness. We make these observations, because we happen to know that effects the most beautiful may be obtained by the aid of our native plants—we have seen rustic seats looking gay, yet refreshing, from their profuse clothing of our *vinca minor* and *major*, and we will venture to wager a Persian melon against a pumpkin, that half the amateur gardeners of England would not recognise those flowers in their cultivated dwelling place. Again, if any one wishes to have the soil beneath his shrubberies gladsome in early spring, let him introduce that pretty page-like flower, the wood-anemone, to wave and flourish over the primroses and violets. Let him have there, also, and in his borders, too, the blue and the white forget-me-not, *Myosotis palustris* and *M. alba*. We will venture the same wager, that not a tithe of our readers ever saw that last-named gay little native. Mr. Paxton's observation applies to them both when he says, as a border flower it has very high characteristics—it only requires planting in a moist soil, slightly sheltered and shaded, to become a truly brilliant object—it is equally good for forcing—very valuable for bouquets—and alike fit for windows, greenhouses, borders, and beds. Under favourable cultivation its blossoms increase in size nearly one-half. The plants only require to be divided annually, and to have the flower-spikes cut off as the lower florets decay. By thus preventing their seeding, a very protracted display of bloom is obtained. These are not a hundredth part of the native flowers which might be introduced with happiest effect in our gardens. We have seen the broom, the honeysuckle, and the holly, blended with rarer shrubs, and aiding the best conceptions of the landscape gardener; and we have seen garlands of flowers, in which not one exotic was interwoven, so beautiful, that none culled from our choicest stove plants could have much excelled them.—*Gardener's Almanac.*

PRESERVING PLANTS IN WINTER.

Nothing has more discouraged the cultivation of flowers than the supposed difficulty of preserving them in winter; and as this apparently formidable object disappears as the amateur acquires experience, I shall endeavour to detail some of the methods I have employed, and their successful results. Of course, my remarks are intended for those who garden on a small scale, and who have not greenhouses for winter protection. At the same time, the principles of treatment about to be described will apply to the largest collections, and may be of service to all whose object is to secure the beauties of the spring and summer from the desolations of winter.

Those whose stock of flowers consists of a few greenhouse plants, which they have cultivated in windows, have a very easy task to perform in protecting their favourites, as far as frost is concerned; for a very small amount of care will suffice, when the plants are in a dwelling-house. The temperature of an occupied sitting-room will always be sufficiently high to keep out the frost in the daytime, even if the plants are close to the light, and they may be easily removed in the evening to that side of the apartment which is farthest from the window. If the amateur has a large number of plants (young pelargoniums, for instance) arranged on shelves close to the window, to remove these would be troublesome, and they may, therefore, be allowed to remain in ordinary frosty weather, the precaution being taken to interpose the blind between them and the window. I once preserved two hundred plants in good health through a severe season, in a room with only one large window, which admitted a good deal of sun. Some of the pots (which were all small sixties) were placed on narrow shelves, ascending to the top of the window, and as near the glass as possible; the others were set on a table. An Arnott stove was lit, when required either by damp or very cold weather; air was given as often as possible; the whole collection was often moved, that light might be equally dispensed;

and advantage was taken of mild rains. I succeeded in preserving the whole, without any sickly growth being developed, and was rewarded by having an abundance of strong plants for bedding out in the spring. Most of these were pelargoniums.

Many plants may be more summarily dealt with. Cactuses and scarlet pelargoniums will do well in a dry cellar, provided no water is given them. The latter, when up from the flower garden, I have preserved by shaking off the soil, and hanging them roots upwards in a shed or coach house, from which frost could be excluded. In the spring, they were found in full possession of their vital powers, and on being trimmed and potted made handsome plants. In all cases to which I have alluded, it will be seen that care and forethought are the requisites demanded of the amateur. Attention must not be remitted for a day. I always found that more plants were lost in the winter by damp than by frost. Much water, therefore, must not be given; indeed, it should be altogether withheld, so long as the plant does not droop. A plant in a moist growing state will yield easily to frost; whilst, if it had been kept dry and dormant, its powers of resistance would have been great.

But no plan of preserving plants from frost, independently of a greenhouse, is equal to a well regulated pit or frame in the open air. I have tried this in various ways, and always found it succeed, if properly attended to. At the present time, all my plants intended to be put into the borders next year, or brought into the house, are in a large two-light frame, the management of which I will endeavour to describe. The frame stands about two feet from the ground, on an exhausted hotbed, on which cucumbers were grown in the spring, and is sheltered by a south wall. The mould of this bed having been kept from rain in the early autumn, at the close of October the pots were sunk into it up to the rims. A double light is then put on, by which wet and frost are most effectually excluded; and about the middle of December the soil around the pots is quite dry. Around the frame, long stable dung is piled up, about eighteen inches in width, and level with the top. Over the whole, an old carpet is thrown when necessary, and I have no apprehension that I shall lose anything, if damp do not defeat my efforts. Every day, when it is not frosty, air must be freely admitted, and dead or mildewed leaves must be carefully removed. When frost sets in, two or three extra mats must be laid on, and the whole kept on till a thaw takes place. On no account remove the coverings until at least a day after the frost is gone. This is a very important rule, for the admission of light may be fatal if any of the leaves should be frozen. In this way I have preserved pelargoniums, calceolarias, verbenas, hydrangeas, &c.; and the freshness of the whole collection after the winter has past away has always been encouraging. Ordinary greenhouse plants, may therefore be preserved by every one during the hardest winters.—*Gardener's Chronicle.*

CULTURE OF THE TROPŒOLUM.

THE practice I am about to detail is from my own experience since the year 1838, during which time I have tried a great number of experiments, but must recede to the previous practice.

Supposing the plants, or at least the tubers, to have been kept in a dry state since about June or July, they should be examined in October, and if found to have begun their growth, by throwing up a small, wire like stem, take them carefully out of the old soil or sand, and proceed to pot them in small pots, in a soil of equal parts loam and sand; afterwards place them, with a slight watering, on a shelf in the greenhouse near to the glass, that the shoots may not be weakened.

When the plants are sufficiently rooted to bear turning out of the pots safely, which will be about the beginning of November, prepare a soil for the remainder of the season, of equal parts good sweet loam and well decomposed leaf mould, to which add a good sprinkling of sharp silver sand. Prepare the pots, according to the size of the tubers, as follows: select the pot the plant is capable of filling, break off the stem, and insert it into another pot a size larger, and fill up the space between the two pots with moss. Next proceed to pot the plants, taking care to use the soil very coarse, that is, broken up by hand, but never sifted.

The plant can be trained to suit the owner's taste. For my own part I dislike the much practised system of training on a trellis having one face—I prefer a good larch fir-top, or something of an appearance more natural.

It will probably be asked, why use two pots in the way described? The reason is simple this. Having ascertained, on commencement of the culture, they were natives of Valparaiso, in South America—denizens of thick woods, growing up large trees, hanging in graceful festoons from the topmost branches, the sun never penetrating to their roots—I considered, therefore, the nearer they were treated to their natural habits, the finer they would become; nor was I mistaken in my conjecture, for their additional beauty more than compensated for the extra trouble.

I forgot to add, I always place pebbles, pieces of sand-stone or moss, upon the top of the pot, as soon as potted.

The extra pot and moss prevent the action of sun or other warmth on the pot containing the roots, which are consequently kept in a regular moist and cool state. Water should be occasionally poured on the moss between the pots.—*Surreyensis.*

APPLICATION OF LIQUID MANURE TO PLANTS IN POTS.

The quantity of earth which the most firm and solid parts of trees afford by analysis is well known to be very small, and even the species of these earths have been proved by the younger Saussure to be dependant to a great extent upon the component parts of the soil in which the trees happen to have grown. A large extent and depth of soil seem, therefore, to be no further requisite to trees than to afford them a regular supply of water and a sufficient quantity of organisable matter; and the rapid growth of plants of every kind, when their roots are confined in a pot to a small quantity of mould, till it becomes exhausted, proves sufficiently the truth of this proposition. I grew a seedling plum-stock, in a small pot, which attained the height of nine feet seven inches in a single season; which is, I believe, a much greater height than any seedling tree of that species was ever seen to attain in the open soil. But the quantity of earth which a small pot contains soon becomes exhausted relatively to one kind of plant, though it may be still fertile relatively to others; and the size of the pot cannot be changed sufficiently often to remedy this loss of fertility; and, if it were ever so frequently changed, the mass of mould which each successive omission of roots would enclose must remain the same. Manure can, therefore, probably be most beneficially given in a purely liquid state; and the quantity which trees growing in pots have thus taken under my care, without any injury, and with the greatest good effect, has so much exceeded every expectation I had formed, that I am induced to communicate the particulars and the result of my experience.

I for some years appropriated a forcing-house at Downton to the purposes of experiment solely upon fruit trees, which, as I had frequent occasion to change the subjects upon which I had to operate, were confined in pots. These were at first supplied with water in which about one tenth, by measure, of the dung of pigeons or domestic poultry had been infused, and the quantity of these substances (generally the latter) was increased from one tenth to a fourth. The water, after standing forty-eight hours, acquired a colour considerably deeper than that of porter, and in this state was drawn off clear, and employed to feed trees of the vine, the mulberry, peach, and other plants. A second quantity of water was then applied, and afterwards used in the same manner; when the manure was changed, and the same process repeated. The vine and mulberry tree, being gross feeders, were not likely to be soon injured by this treatment, but I expected the peach tree, which is frequently injured by excess of manure in a solid state, to give early indications of being over-fed. Contrary, however, to my expectations, the peach tree maintained, at the end of two years, the most healthy and luxuriant appearance imaginable, and produced fruit in the last season in greater perfection than I had ever previously been able to obtain it. Some seedling plants had then acquired at eighteen months' old (though the whole of their roots had been confined to half a square foot of mould) more than eleven feet in height, with numerous branches, and afforded a most abundant and vigorous bloom, which set remarkably well; and those trees which had been most abundantly supplied with manure displayed the greatest degree of health and luxuriance. A single orange tree was subjected to the same mode of treatment, and grew with equal comparative vigour; and appeared to be as much benefited by abundant food as even the vine and mulberry tree.

An opinion generally, though I think somewhat erroneously, prevails, that many plants, particularly the different species and varieties of heath, require a very poor soil in pots: but these might, I conceive, with propriety, be said to require a peculiar soil, for I have never seen the common species of this genus spring with so much luxuriance as from a deep bed of vegetable mould, which had been recently very thickly covered with the ashes of a preceding crop of heaths, and other plants that had been burned upon it; and I believe, if the branches and leaves of the common species of heath were placed to decompose in water, and such water were afterwards given to the tender exotic species, that these, how heavily soever the water may be loaded with organisable matter, would be found as little capable of being injured by abundant food as the vine or mulberry tree, though the species of food which would best suit those plants might prove to every species of heath destructive and poisonous.—*Knight's Physiological and Horticultural Papers.*

TRANSPLANTING OR REMOVING EVERGREENS.

THE removal of evergreen shrubs is a very important consideration in ornamental gardening, and I trust to bring the process of it into something more than a mere speculative operation.

The following hints are, however, chiefly applied to the transplantation of large plants, as small ones may be removed at almost any season with nearly equal success. In the prosecution of some alterations which have involved the planting of numerous large evergreens, and in considerable variety, immediate effect being desired, opportunities presented themselves of comparing extensively the result of the various seasons, and marking the effect of each. I may, therefore, premise then an opinion, and not an erroneous one, as commonly entertained, that should evergreen shrubs be removed during the months of November, December, January, and February, the effect will be nearly the same. Notwithstanding this, I am still, however, persuaded, that there is a certain time better than any other for performing every operation, especially of gardening, the data for the fixing of which are to be found in the immutable laws of vegetable economy; and the various scientific operations of the skilful horticulturist are guided by these axioms, and a knowledge of them is indispensable to the success of his performances. Hence, such an acquaintance with the physiology of plants points out to him the season of grafting and budding, the removal of shrubs, and every other operation which he has to perform, and enables him also to calculate with certainty on his success.

Having said thus much by way of preliminary remark, I come now to what more immediately forms the subject of the paper, viz., the proper season at which evergreen shrubs should be transplanted, so as to sustain the least injury from their removal.

The period, then, of the greatest action in the economy of these shrubs, is surely not the desirable time, neither can that be the most fitting season when they are comparatively in a torpid state. In the former instance, the plants will suffer from the natural season of excitement, which the more or less unavoidable mutilation of the roots will render them unfit to sustain; whereas, in the latter case, the fibrous roots will perish from the extended period during which the plants will be compelled to remain in a torpid condition. Well, then, a time between the two extremes (say the month of April) may be suggested; but this would be a fatal suggestion, as, at this season all vegetable life is, as it were, charged with a voltaic battery, waiting the influence of a genial sun to discharge its accumulated provisions into leaves, flowers, and fruit. The branches must sympathise with the roots, which at the three periods cited ought not to be disquieted. It will be perceptible, from the preceding observation, that there is yet another season at which the proceedings of the skilful and cautious horticulturist may yet be rendered successful, and the guide for discovering this period is a very simple one. The time I propose shall be alike free from the extremes of either present or immediate prospective excitement, and yet shall not be the season of maximum transpiration. It is a well known and understood fact, as well as a matter of common practice, that the successful propagation of a great number of evergreen shrubs is prosperously effected at the time the young shoots have attained a firmness of texture, easily distinguished by the practical operator. We may instance the laurel, camellia, &c., which will have arrived at this condition about the end of August. These cuttings then contain abundance of the active circulating fluid, which, in its downward course, forms a callosity, which presently emits roots. It is at this time, during the declining year, which I have found the most desirable season to conduct the operation of transplanting evergreen shrubs. I have thus laid down a general rule for removing evergreens, familiar to everybody, and mentioned a law upon which it is founded, which is within the comprehension of all. The young shoots at this season will have attained sufficient maturity to render their suffering from removal, or from the aridity of the season, very trifling, as the whole plant will contain enough of the active sap to propel fresh spongeoles when located, so that after a copious watering the general appearance of the plant will have sustained little change.

The preceding statement may be considered as [illegible] recommendation is founded on some degree of reason, as in practice it has proved successful. Should you consider it worthy of a place in your journal, I may just add, that if it does not render the contending, and apparently somewhat anomalous opinions held upon this subject, reducible into one regular and rational mode of proceeding, it may, at least, have a tendency to that end ; and it is to be desired, also, that any further discussions on a subject so important as the one under review, may be conducted in a spirit anxious only to establish gardening operations on philosophical principles, apart from the tone of vindictive acrimony too frequently adopted in similar investigations.—*R. Glendinning.*

CULTURE OF THE CARNATION.

In September take the layers off the old plants, and pot them two in each forty-eight sized pot, in soil composed of one-half leaf soil, and one-half coarse pit sand approaching to grit. Before placing the plants in the pots, give a good drainage by plenty of potsherd. When potted, give a sufficient watering, and place them, exposed to a mid-day sun, in a frame filled with old tan, so high, that it will just admit the pot and plant to stand on the surface, and not touch the glass. Shut them close down, and shade them for a few days until recovered from potting; then begin gradually to give air, and increase it till, in dry warm weather, the lights may be entirely taken off; take care to close them down again before the evening dews fall, and preserve them at all times carefully from excess of wet, or mildew and canker will infest, if not destroy the plants. Follow this mode of treatment until November or December, giving a little water to those which appear dry. When severe weather sets in, keep the lights completely closed ; but when the weather changes and the days lengthen, give air as before, until the latter end of March, when, for a few days before final removing, give full air night and day. In potting, place a single plant in each thirty-sized pot for blooming ; the soil used, is composed of three-fifths decomposed leaf soil, one-fifth coarse pit sand or grit, one-fifth road scraping from a limestone made road, or the subsoil or paring next the stone used for lime ; these ingredients should be well mixed and exposed to the frosts of winter, and be frequently turned, at the same time carefully picking out all worms, wireworms, &c. Fill each pot with about one-sixth of well broken potsherds to give a good drainage, place a little of the coarses soil upon this, and place one plant in eac pot; reducing the old ball a little, so that th roots, when finally placed, may just b within the rim of the pot, not deeper; the fill up with the compost, and plunge the pot in the ground where they are intended t bloom, the rim being just covered with air Before plunging, lay a small portion of soo in the place where each pot is to stand ; thi prevents the entry of worms, &c. Thi method is preferable to growing the plant either in large pots to stand on the surfac or in the open ground. In the season c layering, place an inch thick of fine sand soil round each pot ; in this the layers wi readily strike root.—*Horticultural Society Transactions.*

ON GROWING ROSES IN POTS.

Advantages of Growing the Tende Kinds in Pots.—There are many advantage when plants are grown in pots, of which w are not able to avail ourselves when they ar grown in the open ground. With regard t the tender varieties of roses, they are ver great, if we only take into consideration th facilities afforded of protecting them fro heavy rains and frosts by means of pits ; an it is not surprising to find they thrive s much better under glass than when expose to all the changes and severities of th weather. Hitherto the Chinese and te scented roses have not been grown wit much success in the immediate neighbourhoo of London, nor in the North of Englan when planted in the open ground. It i notorious that no collection, however smal can be complete without some portion these roses ; and it is the vexatious disa pointment alone, attendant on their consta failure, that could have caused their growt in certain localities to have been given u Doubtless, in some instances, an impur atmosphere may have caused the failing but I humbly suggest whether, if carefull examined, the soil and situation would u often propound the difficulty. The eas then, with which we can remedy thes disadvantages, when the plants are grown i pots, leads me to propose their cultivation i this way to those with whom they have n hitherto succeeded : and there is good groun to believe they will succeed well in this wa and especially if grown under glass. Exce for forcing, cold-pits are perhaps perferab to a house, where they should be kept clos to the glass, and plenty of air given. The should have the advantage of dews and soft showers—the lights in summer being merely used to protect them from cold nights and rough weather, and by help of mats or canvas from a hot sun.

TRANSPLANTING AND POTTING.—Early in autumn, immediately after rain, is the most favourable time to remove plants from the ground, and more especially such as have grown moderately with well-ripened wood should be chosen. The sized pots best suited are Nos. 32, 24, 16, and 12, according to the size of the plants; and they should be well drained. In potting, the soil should be pressed firmly in the pots, watering freely afterwards, through a fine rose, to settle the soil about their roots. The cultivation of the autumnals on their own roots may be commenced at any time, as they are usually kept growing in pots. If purchased in spring, in sixty sized pots, they may be immediately shifted into forty-eights, then plunged, and watered occasionally, as required. Our aim being to get the plants strong, they should not be suffered to flower; and we should endeavour through the growing season to bring them to form a few vigorous shoots, in preference to a greater number of weak ones. To accomplish this, it is advisable to rub out some of the buds when first pushed, keeping in view the handsome formation of the plant. The plants may be shifted on through the season, and in the following season we shall probably find them in sixteen or twelve-sized pots preparing for a vigorous growth and bloom.

SOIL.—The soil in which I have seen them succeed well, and have generally used, is two parts fresh turfy loam broken up, but not sifted; two parts manure (road gatherings laid by for a season, or the remains of a hot-bed, not too far decomposed); and one part burnt earth. This compost should be thrown up in a heap in autumn, and turned two or three times during winter, and a little newly slaked lime scattered throughout to destroy worms and grubs. This is the soil used for the mass; but for the delicate varieties (Chinese, &c.) it may be improved by the addition of one part of leaf-mould or well pulverised manure.

PRUNING.—About the middle of November pruning may be performed, in order to effect an early bloom. It is a difficult matter to lay down any precise rules with regard to pruning; upon the judicious adaptation of which depends not only the well-forming of the plant, but, in a great measure, the perfection of bloom also. In order to prune roses with certainty of success, we ought to know the character of each plant we are about to operate on, for roses of the same class ofttimes require very different pruning. The best criterion we can offer is, perhaps, habit of growth. Among the hybrid Chinese, the two favourite old roses, Brennus and Fulgens, both vigorous growers, frequently occasion great disappointment by not blooming. The failure will probably be found to arise from the method of pruning. These roses and others of like habit, should be well thinned out, but the shoots which are left for flowering shortened but little. Others of the same class (hybrid Chinese), that are weak growers, may be shortened in close, such as General Allard, and Lady Stuart. There are also varieties of intermediate growth, which may be pruned in proportion. The classes Gallica, Provence, and Moss may be pruned closer than the hybrid Chinese. The autumnal roses there is but little fear of pruning out of bloom; early or late they are sure to flower. One point, too, should be kept in mind, that roses, when grown in pots, may be pruned closer than when grown in open ground.—*W. Paul, of Cheshunt.*

CULTURE OF THE AZALEAS.

ALL tender azaleas require one general mode of treatment, which is as follows:

Pot them as soon as they have done flowering, which will be about the end of May, except those intended to be left for seed, which must remain until they have ripened their seed.

Use a mixture of equal parts of sandy loam and peat, with a small portion of leaf mould, in preference to all peat, and be particularly careful in potting to give a good drainage of broken potsherds, for although they delight in moisture, stagnant water usually proves injurious to them. About the middle of June, place them in a somewhat sheltered and shady situation, out of doors. Allow them to stand in this situation till September, then remove them into a pit or greenhouse, in any airy situation, until they be wanted for flowering. It is a great assistance to them, when about expanding their flowers, to remove them into an increased temperature; this should be from sixty to sixty-five degrees of Fahrenheit, and the plants may be introduced about the middle or end of September, which will come into flower towards the end of October, and will continue blooming till December; others brought in the end of November, will commence flowering till February, when those in the pit of the greenhouse will commence flowering and continue till May.

When they are in flower, a good supply of water is requisite to enable the plants to support them; any deficiency in this respect will cause the flowers speedily to fall.

When they have done flowering, assist them by every means to make young wood, a good supply of which must be secured before they are removed from the increased heat. For this purpose syringe them about once or twice a week, and after they have grown considerably, then treat them like other greenhouse plants, merely giving them a good supply of air and water. When the young shoots are from four to six inches long they are best calculated for cuttings. Take them off after the plants are removed to the greenhouse, separate each cutting close to the old wood from whence they start, trim off no leaves but those which grow in the pot. They must be planted in either sand or light soil, the former being the best; plunge the pots in a little heat and place a hand-glass over them, and in the course of a fortnight or three weeks they will strike root.

When they have struck root, transplant with balls into single pots filled with the compost recommended for the old plants, and again plunge them into a little heat until they have begun to grow, after which they may be removed to the greenhouse, and be treated like other greenhouse plants.

Many of the greenhouse species and varieties will bear a good degree of cold, and will thrive very well if planted under the wall of a stove, greenhouse, or other warm situation, but in winter they must be sheltered by mats from the effects of the frost. The Indica phœnicea flowers most beautifully when planted out in the border of a conservatory; it will there grow from four to six feet high, with a good supply of water, and slight shade. Hardy species and varieties require little care; they may be either grown in a bed or otherwise to suit the fancy of the cultivator; always select for them a situation somewhat shady and rather damp, but by no means one where water stagnates, unless a good drainage be laid underneath. In all dry summers a good supply of water is advantageous, though not indispensable; but plants so treated always thrive more than under any other circumstances.

Some of the species produce abundance of seed, which may be sown in frames or pots as soon as gathered; place them in a shady situation, and keep them rather moist, until they vegetate.

As soon as they are of a sufficient size transplant them into other pots, and plac them under a glass, and let them be slightl shaded, until they have again started. The expose them by degrees, until they be hard enough to be planted out.

The hardy species and varieties are als readily propagated by layers and cuttings The branches in layering merely requir pegging down without any tong, and regular supply of moisture administered The cuttings may be taken off precisely i the same manner as recommended for th greenhouse species and varieties, but instea of planting in pots, they may be planted under a hand-glass in a shady border.

The azalea is scarcely separable from th rhododendron, with regard to the number o stamens; some seedlings raised from th azaleas having only five stamens, have themselves possessed ten and even more, whils seedlings raised from rhododendrons have ha less than ten stamens, and in other respect have very nearly resembled azaleas.

The generic name is given from the natura habit of the plants, many of the Nort American species growing in dry stee declivities, or in dry plains, where for a long time they can scarcely receive any moisture

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Grubs.—We do not know a more efficacious remedy for the grub, than quick lime it may be strewn broadcast on the surface which must then be well raked. If this b done, in moist weather the efficacy will b greater. A solution of lime, independentl of enriching the compost, is a preventive fo all kind of vermin.

Lilium Lanceolatum Album.—The lil is a plant of about the same height as th larger iris. There are sixteen species introduced into Great Britain, and they are all considered choice flowers. They are almos always propagated by offset bulbs, thoug new varieties may be raised from seed, whic ripens in most sorts in August. The mor common sorts of flowering bulbs will thrive i almost any soil and situation, not even excepting under the shade of trees. They ar generally planted in borders, and need not b taken up oftener than every three or fou years, in September, and replanted six inche deep in the October following. None of th species can be safely transplanted after they have pushed leaves without weakening them so as to prevent their flowering for severa years. This remark, indeed, will apply t most bulbous-rooted plants.

THE IRIS SUSIANA.

At p. 283 we gave some general instruc- ons for the cultivation of this noble looking ower; we will now proceed to offer a few ore remarks, by which we may benefit the rdener or amateur in the cultivation of is particular species of the Iris family.

It is a good practice to pot this beautiful ant in November, and place it in a cool ame. If it be required to bloom early, it ay be taken into the forcing house, and by xciting its growth, may be brought to flower bout the commencement of March.

The seeds should be saved from very strong lants that have stood under a warm wall. et them be dried in the usual manner, nd let a bed be prepared in a sheltered rt of the garden, with the compost before escribed. The spot must be open to the orning sun, and defended from the mid-ay heat. On this bed let the seeds be cattered with an even hand, about the atter end of August, and covered with a uarter of an inch of the same mould. When the young plants appear they must e weeded and gently watered, and about he end of September they should be taken p, and planted in another bed, at eight nches distance, where they may stand all he September following, and then it will e time to remove them into the flower garden, for they will flower the next year. A bed must be made for them in this place, and they must be planted at eighteen nches distant. They must be carefully weeded and watered, and the succeeding summer they will flower. Let the finest be marked whilst in bloom, and in the September following let the roots be all taken up, and a new compost thrown into the place. The inferior kinds may be planted out in the borders of the garden, and the finer kinds kept together in their former place, though in a new soil. When they have been nursed in this manner two or three years, they may be increased by parting the roots when taken up in autumn for renewing the soil, and at the same time seeds should be saved from one or more of the very finest flowers, and thus a new stock will be raised. The old plants are then to be removed into the common borders, as soon as the new seedlings come to the state of perfect flowering, but the same place is preserved for the choicest kinds. There is no great trouble in the management of seedling plants to those who raise great numbers, and there is no other or better way to attain perfection in the several flowers.

The most indifferent of these plants will be a very great ornament in the borders, and so much attention must be shown to the warmth of the native climate of the plant, even in these, that they must have a warm and sheltered place, though in the common mould, otherwise they will become either very weak or absolutely perish.

THE SCARLET GERANIUM.

An amateur grower of the scarlet geranium gives the following as his method of successful cultivation. He says:—In the autumn I procure one load of rotten horse dung, one ditto of drift, taken from a gravel road, these are well mixed together, and then allowed to remain undisturbed until the spring; in the meantime, however, frequently watering them with urine. In February I procure one load of good friable loam, and half a barrowful of charcoal; selecting dry weather, I pass the whole through a coarse sieve, well mixing the various ingredients; the whole mass is then covered over with prepared felt, to protect it from the weather; the cuttings are then taken from the striking pans with a small portion of mould adhering to the roots, the pots (large sixties) are then filled about an inch high with crocks, a very small quantity of the prepared compost is to be placed over them. The geraniums are now inserted and the pots filled up with mould, gently pressing it down with the two fore fingers, water the plants sparingly, and place them on a hot-bed, admit air in fine weather; in about six weeks re-pot, in larger pots; continue this treatment until the end of May, when the plants may be bedded out at three feet distance apart, nothing more is necessary except an additional watering in dry, sultry weather; plants treated in this manner begin to flower in June, and continue to produce trusses of bloom (often the size of a tea saucer) until August, when selecting all the ripe top shoots I cut them off about six or eight inches long, and insert them in striking pans, using the following compost:—loam, 1 part, dung 1 part, silver sand 2 parts; the plants should not have any water for a few days, owing to the natural moisture of the cuttings; shading from the mid-day sun is absolutely necessary until well rooted; at the latter end of September remove them into the house, and discontinue watering.

CULTURE OF THE CACTUS.

Pot them in loamy peat, or sandy loam, mixed with a small portion of lime rubbish, say about a fourth part.

Always let the pots in which they are planted be as small as the plants will allow; large pots are injurious, because the roots are prevented from reaching the sides for a long time, and the body of the soil is liable to retain too much moisture every time the plant is watered.

Always give a good drainage by laying in each pot a good portion of broken potsherds, as the least stagnation is always injurious, sometimes fatal; therefore never allow water to stand in the pans or feeders, in which the pots are sometimes placed.

Water very seldom, not more than twice a week, when they are flowering, and not so often at other times; give very little at a time, not more than will just moisten the soil all over, particularly if the weather be not fine and sunny.

About the middle of June turn them out of doors into a situation where they will not be exposed to wind, but perfectly open to the rays of the mid-day sun. Place them on a board or floor of any kind, in order to prevent the worms from effecting an entrance from the bottom of the pots. This system of exposing them in summer gives them a check which seldom fails to produce a good bloom.

Whilst out of doors, they must not be allowed to receive the heavy dashing rains, or they will suffer, perhaps die, in consequence; either a boarded roof, or other shelter must be provided for them on such occasions. Also, if the pots stand on a floor of slates or flag stones, they should be plunged in a little moss; by heating, the pots sometimes burn the roots of the plants.

In September, take the plants into the greenhouse, and place them in a situation where they will receive plenty of light and air in winter.

Early in the spring remove them into the stove in succession as they are wanted to flower.

Most of the species will flower very finely without being placed out of doors at all, but by placing them out as above, the flowers will be much finer and more abundant than when grown regularly in the house; they may increased by cuttings, seeds, and grafting.

Take off the cuttings at the length required, and lay them on a shelf in the greenhouse to dry up the wound made by the knife; let them remain on the shelf till they begin to have a shrivelled appearance, say a week or a fortnight, then pot them in small pots in the same compost as recommended for old plants; set them on a shelf as near the glass as convenient, and be particularly cautious not to over-water them.

Sow the seed in a wet state, immediately after being gathered from the plant and rubbed out of the husk. For this purpose, fill a pot with a mixture of equal parts of peat earth, and sand; cover it lightly, and plunge the pots into a hotbed; if the seed be good it will make its appearance a month afterwards.

The operation of grafting is very simple, merely requiring an incision to be made, and fitting in it a fresh cutting of another kind, rubbing a little clay over the wound to keep out the air.

HEATH MOULD AND PEAT EARTH.

As in the account of the different soils that are used in the formation of composts, for the purposes of floriculture, several amateurs find a difficulty in distinguishing the exact meaning of the terms, *peat*, *peat earth*, *bog earth*, and *heath mould*, and as it is a species of knowledge indispensably necessary to every one engaged in horticulture, we lay before them the following information.

Heath mould is the soil which occurs in heaths, sites not extremely wet and low as bogs are, but usually elevated, and in consequence well drained, and exposed to the scorching rays of the sun of summer, and the withering blasts of winter. The stratum, or layer of soil, is usually less than twelve inches in thickness, lying on a stony subsoil, and both the soil and subsoil of so sterile a quality as to forbid tillage, yielding usually a tough, thickly woven turf, and heaths or ling, and furze in abundance, with occasional brambles, and low stunted specimens of other shrubs and trees. This stratum taken off, so as to leave the stones bare, forms, when partially decomposed and comminuted, the invaluable and indispensable soil for innumerable plants of the garden, and is composed of the decaying turf, with its spongy interwoven roots, a highly friable black soil, and a plentiful admixture of small grained white sand. The blackness of the soil is no doubt partly owing to the perpetually progressive rotting of the exuviæ, cotinually supplied by the growing turf, and which decaying exuvæ, besides the blackness given to the soil also in no small degree gives the properties of leaf or vegetable mould. From this, the spongy masses of vegetable fibres, the friable nature of the soil itself, the decomposed vegetable matter, and the large proportion of white sand which it contains, arises its peculiar eligibility for all plants with delicate hair-like roots. In many districts of the kingdom of Great Britain there are immense tracts of this kind of land, that in their present state are of little value, except for the support of a few sheep, but which, by proper cultivation, might afford useful crops.

Peat earth or *bog earth*, on the contrary, is the soil yielded by fens, turbaries, bogs, and morasses. It constitutes almost the entire soil of the fens of Lincolnshire and Cambridgeshire, and is, in fact, the soil forming the turf of which so many millions are annually dug, sold, and burnt as an article of domestic fuel. Peat, instead of being in a thin stratum, forms sometimes a stratum of great depth; instead of occupying high sites, and being well drained, it occupies the lowest, and is usually saturated with water to the very roots of the herbage it bears; instead of a strong subsoil, stones are almost totally absent, and the subsoil is a water-holding clay. Whilst heath mould is most important to the gardener, peat is unfit for, and inimical to most of the purposes of floriculture.

CULTURE OF THE HELIOTROPE.

The heliotrope is a native of the shores of Peru, and was introduced into this country in 1757. Its botanical characters are, a shrubby stalk, branching numerously, three or four feet high, spear shaped, ovate, rough—veined, hairy leaves; from the end of the branches issue numerous clustered umbels of pale blue flowers. Calyx monophyllous, five cleft at the top. Corella, monopetalous, divided into five unequal segments. Stamina five filaments and small anthera. Pistillum four germina, slender style and notched. Pericarpium none, seminæ oval, lodged in the calyx.

In order to propagate this fragrant exotic with success, cuttings must be taken from the parent about the latter end of February or beginning of March, and plunged in a strong hotbed or bark pit, removing all decayed leaves, &c., as they appear, or they will affect the whole. In two or three weeks, when the cuttings have grown, they must be removed to an airy part of the hothouse for a few days, in order to harden previously to potting. If a succession of flowering plants through the autumn and winter months be wanted, more cuttings should be put in, during May and June.

If they be intended to be kept in pots, provide some good soil, composed of one wheel-barrowful of good maiden loam, one barrowful of good rotten horse-dung, half a barrowful of sandy peat, half a barrowful of prepared leaf or vegetable mould. The whole must be well chopped and incorporated together, but not sifted; pot off the cuttings in forty-eight sized pots, allowing as much soil to adhere to their roots as possible; cover these balls of roots about a quarter of an inch deep, pinch off the extreme end of the plants to cause them to grow bushy, and after giving them a watering, place them in a shady part of the stove till they have taken root, then remove them into a more exposed situation, and give them plenty of air and water. Due attention must always be paid to potting them as often as the roots appear to mat, or the plants will assume a sickly hue, and naked, unsightly plants will be the reward of your pains. When in bloom remove them to the greenhouse, or conservatory, where they will continue to flower the greater part of the year. When they have done flowering, set them in a cool part of the greenhouse until the following February, when they should be cut down, their balls reduced, and repotted in the compost. When potted, they should be placed in a hotbed, to produce healthy shoots for propagation, after which the old shoots may either be turned into the flower borders, or thrown away, as young plants raised every year are much to be preferred for flowering in pots.

But if the heliotrope be grown purposely for the flower garden, cuttings put in during the month of September, potted off into small pots, kept in a close frame, and well protected from cold nights, by means of mats or long horse litter, until the following spring, is considered the best method. Harden them by gradual exposure to the open air, so that by the middle of May they will bear to be planted out in beds, composed of a good mellow, rich earth. Should cold nights happen after your plants are turned out, which is sometimes the case, they must be defended by means of hoops and mats, or canvas; if thus protected, they will grow and flower freely in favourable seasons, until the chilly nights of autumn give a check to their vigour; they should then be taken up with their balls entire, and potted in good sized pots. If placed in the stove, and shaded for a few days, they will continue to flower down to Christmas, when a few cuttings may be taken from them for early propagation, and the old plants thrown away.—T. F. Ashford.

SIZES OF FLOWER POTS.

As numbers of amateur gardeners are frequently puzzled, with regard to knowing the sizes of pots necessarily mentioned by us in our directions for the operations in the different gardens, we insert the following description:—

	Height.	Breadth.
Thumbs	3 inches	2½ inches.
Small 60	3 ditto	2 ditto.
Large ditto	3½ ditto	3 ditto.
Small 48	5 ditto	4½ ditto.
Large ditto	5½ ditto	5 ditto.
Small 32	6 ditto	7 ditto.
Large ditto	7 ditto	7½ ditto.
Small 24	8 ditto	8 ditto.
Large ditto	9 ditto	8½ ditto.
Small 16	10 ditto	9 ditto.
Large ditto	11 ditto	10 ditto.

12, one foot each way, (only one size).

The above are the sizes, as they are made near London. They vary much in different places; as those which are made sixty to the cast in London, are only forty-eight to the same in some parts of the country.

There are some made larger than the above mentioned sizes, but the above are all that are necessary in ordinary culture.

MANAGEMENT OF BULBS IN GLASSES.

The bulbs usually flowered in water alone are the hyacinth, narcissus, early tulips, Persian iris, Guernsey lily, and crocuses. Those who delight in relieving their winter apartments from the destitution which their flower stands must sometimes exhibit, need not confine themselves to this list. They may take up almost any bulbs from the borders, and place them in water. The absence of glasses used expressly for the purpose need not be an obstacle; sheet lead may be fitted on the tops of china or other stands, and have holes cut in it of proper size to receive the bulbs. Various other methods may also be readily advised. The season for placing the bulbs in water may be at any period after they have been matured, but the most usual with spring bulbs is October, and from that month to February; and with autumnal bulbs, August and September. Planting in earth for a few weeks such bulbs as are to be blown in water, is the best mode of causing them to protrude freely, which, when they are placed in water at once, is not always the case. Whenever the roots are a quarter of an inch in length, take them out of the earth, wash them gently so as not to injure the radicles, and then place them in the water. It is not requisite that bulbs in water should be placed in much heat, for the principal stimulus to a newly planted bulb is the moisture; and if the room in which the glasses are placed be kept to 45 or 48 degrees, that will promote the vegetation for some time as much as if 10 or 15 degrees higher. When the flower-stem has risen an inch or two, then the heat may be considerably increased; that is, the glasses may be removed from a room without a fire to one where a fire is kept, and where the temperature will generally be found between 55 to 65 degrees. Here they will advance with considerable rapidity, especially if they be placed near a stand or stage near a window of a south or south-east aspect. They will blow, however, without any sun, but the colours of the flowers will be inferior. Those who keep bulbs in water are often at a loss when to change it. There is, however, no fixed time for this purpose; the chief principle is to keep the water sweet and pure, and which can be the better accomplished by putting a little salt into the water, which will also contribute greatly to the growth of the plant. Camphor is also a great antiputrescent, and it is highly recommended by many florists to be put into the water—that is, a small bit of the size of a pea into each glass. In a temperature of 45 or 48 degrees, when the bulbs are newly planted, the danger of all putrefaction will be avoided by changing the water once a week. At 60 degrees, and the glass nearly filled with roots, the water will get putrid, and show a muddiness in two or three days, or less, and whenever it does so, it ought to be changed. The operation of changing is easily done by one person, when the roots are only an inch or two long; but after the flower-stems are of some length, and the roots nearly at the bottom of the glass, two persons become requisite: one to take out the bulb and hold it, and to dip its roots once or twice in a vessel of clear water to clean them a little: and another to empty and rinse out the glass, and refill it with water. It is essential that the water used for renewal or for rinsing the roots should be of the same temperature as that which it is to replace, and this can easily be done by pouring a little hot water in the cold water. Whether it be hard or soft is unimportant

NOVEMBER.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

FLOWER GARDEN.

FIRST WEEK IN NOVEMBER.

Tulips.—It is time tulip planting was commenced in earnest. The soil should be covered from heavy rains, that it may be in a friable and fit state to close to the bulbs on planting. It is more advisable at all times to wait a few day till this state of drought can be obtained, than to hurry the bulbs into soil in an unfit state to receive them.

Dahlias.—Continue to collect the late pods of ripe seeds. There is no necessity for taking up the roots at present, but we advise lifting them; they will then be safe from injury by sudden frost.

Bulbous Roots.—This is still a proper time to plant various hardy bulbous roots; and let it be done in dry open weather, and as early in the month as possible, for any general plantations. Tulips and hyacinths, if they be planted in beds, must be planted in rows six to nine inches asunder, and the same distance, or not less than six inches between plant and plant in the row, and about three inches deep, and such as are designed for the common flower borders may either be deposited in a continued row, fifteen or eighteen inches from the edge, or planted in small patches or clumps, three, four, or five roots together. Let these roots be planted in such beds and borders as lie tolerably dry all winter, for if the ground be too wet, many of the roots planted now would be liable to rot, or be much damaged, particularly the hyacinths.

Bulbs in Water Glasses and Pots.—Some bulbous roots may now be planted in water glasses to blow early in the apartments of a dwelling-house, or more early still in a hothouse, such as hyacinths, dwarf tulips, polyanthus, narcissus, &c., filling the glasses with clean, fresh, soft water. Place one bulb in each glass, the bottom a little immersed in the water, and place the glasses in a warm, light room, or in a greenhouse, or in a hothouse. It should, however, be observed that the water into which the bulbs are put should be previously boiled, which will have the effect of destroying all the insects and animalculæ which may be in the water, and which, although invisible, do great damage to the roots. A piece of camphor, or a little salt will be found highly beneficial in promoting the vegetation of the plant. Some bulbs may be planted in pots of light dry earth, some of which are either to flower in the apartments of a house, or in the open air, the ensuing spring, or also to place some in a hothouse or forcinghouse for earlier spring flowering. Observe, in planting these bulbs in pots to insert them only a little depth, or but just covered with earth.

Crocuses and Snowdrops.—Crocuses and snowdrops of different sorts may also now be planted, and it is now high time that all these sorts were put into the ground. These roots may be planted either in small patches or in continued rows, within five or six inches of the edge of the border, or the patches disposed in a varied order, more or less inward, as mentioned last month. Do not plant these roots deeper than twelve inches below the surface. Narcissuses and jonquils, frittillarias, crown imperials, gladioli, bulbous iris, star of Bethlehem, martagons, lilies, and all other bulbous roots that are still remaining out of the ground may now be planted, when time and dry open weather will permit.

Perennial and Biennial Plants.—Many sorts of perennial plants may still be planted, such as the scarlet lychnis, rose campion, rocket, catchfly, campanula, bachelor's buttons, and the like. Likewise plant where wanted sweetwilliams, wallflowers, stocks, July flowers, carnations, pinks, columbines, Canterbury bells, true primrose, Greek valerian, and honesty. This is also a good time to transplant perennial sunflowers, golden rod, perennial asters, hollyhocks, French honeysuckles, monk's hood and peonies, Solomon's seal, and irises. Thrift, London pride, gentianella, double daisies, winter aconite, lily of the valley, polyanthuses, auriculas and primroses, with many other sorts may now be planted. In planting the different sorts, let all the large or tall-growing plants be placed more or less inward in the borders or clumps, and the others of middling or smaller growth planted similarly forward in proper gradation to the lowest towards the front. Likewise observe to intermix the different sorts in such a manner that there may be an agreeable variety and regular succession of flowers in every part. Any principal sorts of perennials and biennials may also be now planted in pots.

Seedling Flowers.—The boxes or pots of seedling flowers should be removed to a warm situation the beginning of this month, provided it were not done in October. If these boxes or pots be plunged in a dry warm border it will secure the young bulbs or other plants the better from the severity of the weather, and when it proves very severe, it will be advisable to cover them with long litter, or with mats, or any in beds may also have similar occasional protection.

Auriculas in Pots.—The choicest kinds of auriculas in pots, and the carnation layers which were planted in small pots, should now be placed in some warm situation, and it would be of material benefit if they could be occasionally guarded from excessive rains, snow and frost, when either happens. The pots may at this time be placed or plunged closely together in a garden frame, if not done last month; and when the weather is unfavourable, let the plants be defended by putting on the glasses. But where there are no frames and glasses, the pots may be set closely together in a raised bed of dry soil, or of very light dry earth; the pots may be plunged; and when convenient, low hoop-bends may be placed archways across, and so covered with mats in bad weather. Let these plants in dry open weather be constantly uncovered, day and night. Where there are no proper conveniences of shelter, as above, place the pots in some warm border, &c., near a south wall, and the pots of auriculas in particular may occasionally, in excessive wet or snowy weather, be laid down on one side under the wall, to preserve them more effectually from damage by too great moisture, and the carnations continued in a similar situation, but the pots not laid down, the plants not being so liable to injury from excessive wet.

Ranunculuses and Anemones.—The ranunculuses and anemones should also be planted in beds and borders of light dry earth, for a wet soil would be apt to rot the roots. Let the beds be three or four feet wide, finished with a slight rounding, with a smooth even surface. Let the choicest kinds of these roots be planted in beds for the convenience of protecting them in winter, and also in the spring when they are in bloom. In planting these roots, let the same distance and manner be observed as in last month. But if they be planted in the borders, let them most generally be put in small patches, four or five roots in each, and the patches may be three or four to five or six feet distant. These roots should not be planted more than two inches deep.

Hardy Flowering Shrubs and Evergreens.—Planting may still be continued in open weather amongst all the hardy kinds of flowering shrubs, and trees for furnishing the shrubbery compartments—such as roses, honeysuckles, syringas, lilacs, and laburnums, hypericums, erodicums, dog-wood azaleas, mazereons, mespilusis, &c., and also may be planted bladdertena, scorpiontena, althea frutex, and spirace frutex, double-flowering cherry, white and yellow jasmines, lumachs, acacias, bignonia, and guelder rose, and all other hardy, deciduous shrubs and trees; likewise most sorts of hardy evergreens. Planting in pots may also now be performed to any desirable extent; ornamental flowering shrubs of moderate growth, to place on fire hearths, or when in flower in any principal compartments, and some to force in hothouses, for early flowering, such as roses, &c.

Newly-planted Trees.—Take care now, if frosts should set in severely, to protect the roots of the choicer sorts of newly-planted shrubs and trees by laying strawy mulch on the surface of the ground; but this is more particularly to be understood of the more curious or tender kinds; but would also be beneficial to all others. Place stakes to secure newly-planted trees and shrubs that stand in need of support, especially those in exposed situations; and this should not be omitted in proper time, it being materially necessary; because, whilst the wind has power to rock them and disturb the roots, it retards their striking fresh root firmly in their emission of new fibres, but being secured with stakes, they will strike sooner and more effectually. Therefore, let a stout stake be driven down to every such newly-planted tree or shrub, which the wind has evidently much power over, either by their tall growth or large head, and let the principal stem be tied to the stake in a neat and secure manner.

Tender Exotic Plants.—The tender exotic plants about in the borders or in beds, such as rhododendrons, azalias, magnolias, helmias, and many other sorts, will be better by mulching about their roots, and some of the more tender ones will require in very hard, frosty weather, to be covered with mats. The China rose, also, and some others of a delicate nature, should be mulched up about the roots, and covered with some sort of covering, if the frost be very severe, without a large covering of snow on the ground.

Alpine and other Rare Plants in Pots.—These plants should be placed in their winter quarters as early in the month as possible, not only to prevent the pots from being broken, by expansion from frosts, but also to guard the plants from too much moisture. Those which were placed under cover last month should now be frequently looked over, and all dead or decaying leaves or stems removed, as well as all mouldiness upon the surface of the mould in the pots. Anything tending to encourage decay should be carefully removed. Many of the more rare species should have the surface of the mould in the pots covered with fine sharp sand, or small fragments of porous stone or brickbats, to act as absorbers of superabundant moisture. The glasses or covers should now be kept on, during damp and wet days, and almost always during night, in order more effectually to guard against damp, or too much moisture, of which most alpine plants in a state of cultivation are impatient, in autumn and winter.

Borders of the Flower Garden.—In the course of this month, most of the herbaceous and annual plants will have gone out of flower. The borders should then be gone over, and the remaining plants regulated; the decayed stems cut down, and the borders neatly hoed and raked or dug. In this state they are to remain till spring.

Greenhouse Plants.—When the weather is open and mild, some of the glasses should be opened every day, to admit fresh air into the house, particularly when the sun shines; but this should be done before nine or ten o'clock in the forenoon, and they may be left open during four or five hours each day, according to the temperature of the air. If sharp, frosty weather continues in the day time, the house must be kept close shut; and where there are flues, it will be of considerable advantage to heat them occasionally, in order to expel any damp in very wet, foggy weather, but by no means let the flues be overheated. Also examine the plants to see when they require a moderate degree of water, although plants of a succulent nature will scarcely require any. All dead and decayed leaves should be instantly picked off, or if they have contracted any mouldiness, dust, cobwebs, &c., they ought to be cleaned. All decayed shoots should be cut off, the earth in the tubs or pots must be loosened where it is bound, and every part of the house kept perfectly clean. Where any of the hardier kinds of greenhouse plants, such as myrtles, &c., are kept in frames and glasses, plenty of air should be admitted, giving occasional moderate watering, observing to shut the glasses close in the evening, and in cold weather or severe frosts, at which times the glasses should be well covered with mats, &c. By these means the plants may be preserved in health during the winter. The hardier kinds of plants from New South Wales and elsewhere may be placed in a dry pit, and covered with a frame and glasses, and managed in the same manner.

Gravel Walks.—The gravel walks should often be cleared from leaves and other litter, and occasionally rolled; as few weeds now appear, these should be taken out, and the frequent rolling will prevent others from rising, or the surface being overrun with moss. This is much more eligible than to throw the walks up into ridges for the winter, with an intention to kill the weeds, and prevent their seeds from vegetating, since this would rather tend to promote their future growth, besides rendering the gravel unfit to walk upon.

SECOND WEEK IN NOVEMBER.

Tulips.—Get the bulbs into the ground as soon as you can. Every day they are kept out will tend to injure them more or less.

Polyanthuses.—As soon as the soil is sufficiently dry, move the surface between the plants, destroy slugs, and earth the plants up with a little fresh soil, so that the stems be well covered to protect the roots, &c., from frost and insects.

Pansies.—Where convenience is at hand, it will be advisable to pot off a few plants, and protect them in a cold frame through the winter months; they will be found useful to repair losses, by making good deficiencies in beds in the spring. Treat them after the manner of carnations. Give as much air and light as the weather will allow.

Dahlias.—It is not at all improbable that by the middle of this month the frost may have killed the dahlias down to the ground.

When this takes place, the stems should be cut down to within a foot or nine inches of the ground, preparatory to their being taken up for the winter. This should be proceeded with only on dry days, and when the earth is dry also. A very slight covering of litter, fern, or rotten tan, will protect them in the ground all winter; and when this plan is followed, the plants will flower earlier next summer. But by far the safest and most usual method is to take them up as soon as the autumnal frosts have destroyed the tops, and pack them in dry sand, in a dry cellar or hothouse, where they are safe from the influence of frost. Great care ought to be taken that the tubers be not cut, mangled, or bruised, when they are taken up, and that they be moderately dried, previously to being stored away. Upon a large scale they may be buried in pits like potatoes, or in any other way so that they be not dried up, nor yet suffered to rot from a superabundance of moisture. Many dahlia roots are annually lost from both causes; and it would appear that in moderately dry soils they would be much safer if left till wanted in the ground where they produced their flowers, and slightly covered thereby. Being taken up immediately after the abrupt and consequently unnatural suspension of vegetable life, and stacked in any way whatever, it appears that a pre-disposition to ferment is brought on in the roots so treated to an extent equal to the destruction of vegetable life, analagous to what takes place in the case of potatoes allowed to ferment, from being pitted either in too great quantities, or in too damp a state. Dahlia roots, upon the other hand, when exposed to atmospheric changes, from being hung up or laid upon open shelves, suffer equally, but from a different cause from that of fermentation, namely, from too powerful an action of air on their surface, which dries them up so as completely to destroy the vital principle. During winter, but particularly during the first few weeks after they are taken up, they should be often carefully examined, as they are more likely to become rotten when first taken into the house than afterwards. It is of little consequence how or where they are kept during winter, so that they be moderately dry, and secure from frost. Few cultivators now keep their dahlias in the ground during winter, because, besides the chance of losing the more tender varieties, the increase of new sorts is now annually so great that the arrangement of planting them requires to be altered every season. It, therefore, follows, that where dahlias really stand in the ground without injury during winter, the very circumstance of a fresh arrangement at planting time, by the exclusion of some sorts, and the addition of others, would render their being taken up a measure of positive necessity. Young plants are said to produce the finest flowers, and hence the necessity of multiplying them annually from cuttings, which make the best plants.

Ranunculuses and Anemones.—More ranunculuses and anemones should now be planted, to succeed those put in the ground in the former month. The beds or borders should be dry, and so rounded as readily to carry off rains, &c. The choice roots, like the tulips, require protection, by occasional covering with mats, &c. They should not be planted deeper than two inches in the ground, and at the distance of six inches from each other, or they may be placed, that is, those of an inferior kind, on the common flower borders, in circular patches of four or five roots, with one in the centre, and the patches four or five feet distant.

Auriculas and Carnations.—The plants of choice auriculas in pots, as also those of carnation layers, should, if not done before, be now removed into a warm situation, where they can have the benefit of the mid-day sun, and be well sheltered from heavy rain, snow, &c., by coverings either of glasses, mats, canvas, &c. The pots containing the less valuable kinds may be placed under the protection of a south wall, and in wet weather laid down on their sides to protect the roots from receiving too much moisture. Where any dead leaves appear, let them be taken off; and now and then, where the plants are not laid down, stir the surface of the mould in the pots, which will give them a neat appearance, as well as benefit the plants.

Bulbous Roots.—The tulip and hyacinth roots may now be planted to succeed those put in the ground in October. The tulip roots, if planted in borders, may be put in the ground about six inches deep, and six or eight inches distant from each other, but the inferior sorts may be planted towards the front of the common flower borders, in small clumps or patches, four or five roots together, and the patches four or five feet distant from each other; those which are planted in beds should have them rounded, and where the soil is of a moist nature, the beds should be raised six inches above the common level of the ground. The same management will be required for the hyacinths, crocuses, narcissuses, jonquils, snowdrops, crown imperials, lilies; and several other bulbs, which are left unplanted, should now be put in the ground, as directed in a former month.

Prune Flowering Shrubs. — Prune

flowering shrubs and evergreens, and the shrubbery ground between and about the plants. Cut out from these shrubs, or prune as required, any very long rambling and rude shoots of last summer's growth, also disorderly low stragglers, and reduce to order any very irregular growing main branches, and cut out casual dead wood, or where the general branches of any particular shrubs grow in a very confused, rambling irregularity, should give them a little orderly pruning, as may seem necessary, whereby to reduce the head to a somewhat regular form. Let none of the branches of two or more shrubs interfere or mix together, but let every plant be kept single, which is always more pleasing to the eye, except in such compartments where it is designed any shall form a thickly growth and overspread the ground. When the shrubs are pruned, let the shrubbery ground be then dug nearly one spade deep, and take up all suckers sent up from the roots of the shrubs.

Transplant Suckers for Propagation.—Take up suckers of roses and lilacs, and of various other shrubs, to plant for propagating the respective sorts; plant them in nursery rows, where they will make proper plants in one or two years' time, and may then be transplanted into the clumps or borders.

Mignonette, Stocks, &c. — Look to mignonette, stocks, and all other sorts of flowering plants in pots, that they be protected from severe weather. They should be set in the greenhouse, or in some other houses in frames, where the air is nearly of a heat capable of preserving greenhouse plants during winter.

Greenhouse Plants.—Continue careful attention to your greenhouse plants, now in general all housed for the winter—they will require admission of fresh air every mild day, occasional gentle watering, and protection from frost and other inclement weather. When the weather is temperately mild and calm, let some of the lights or glass sashes be opened moderately every day, about nine or ten o'clock in the morning, to admit fresh air, observing to open them sooner or later, and less or more, according to the temperature of the day, or whether cloudy or sunny, for they must be allowed a plentiful supply of pure air daily, at all favourable opportunities in moderate weather, being careful to shut the windows about three or four o'clock, or sooner if the air changes very cold, or a sharp cutting wind, in which case it will not be proper to open at all, and never admit air in very foggy, or raw, cold, damp weather. Watering to the exotics of this department will still be required, occasionally, in a moderate degree, but principally in mild, temperate weather, and preferably in the forenoon of a sunny day, paying particular attention to give it only where you shall see necessary, and always with some cautious moderation, so as never to over-water at this season, nor any time during the winter. Where any of the hardier kinds of greenhouse plants are in frames or glass pits, give moderate air on mild days, and occasional very gentle waterings; shut the glasses close every evening, in cold weather, and if frosty or very cold, cover the glasses at once; likewise in severe frosts apply a lining of litter or moderately warm dung on the outside behind.

Seedling Bulbous-rooted Flowers.—The beds of seedling bulbous-rooted flowers which were not removed the last season should be raked over, in order to prevent moss or weeds from growing upon them, and some fresh earth should be spread over their surface, in order to prevent the frosts from injuring the roots; and when there is danger of severe frost, if the beds be covered over with some rotten tan, it will prevent the frost from penetrating deep into the ground.

Planting Deciduous Shrubs.—In light absorbent soils all kinds of deciduous shrubs may now be planted, if the weather be favourable for their reception; but wet soils, in cold situations, should not be planted in till spring. Nothing can be more hurtful to a plant than, at this season particularly, to bed its roots in mortar, by which the tender fibrils are ever afterwards cramped, if they do not actually perish in consequence. Even light soils, therefore, should not be planted in at this time, if they be in a very wet state. The mould at the time of planting should be so far pliable as not to adhere to the spade, which, indeed, is a good rule in planting at any season or in any soil.

Chrysanthemums. — The chrysanthemums are now in full flower, and should be regularly watered; and if they be in pots, they should be placed where they can have the full benefit of the mid-day-sun. The flowers which have begun to fade should be removed, as, independently of their unseemly appearance, they have a tendency to injure the blooms which are yet upon the plants. We have seen in a certain horticultural work that it is recommended not to cut down the stems after the flowering is over, and the foliage has begun to decay, and this advice is given on the principle, that the old stems both shelter and retard the young suckers. If practical gardeners would attend more closely than they are in the habit of doing to the dictations of Nature, and not be guided by fallacious theories, we should not see so many blunders committed in the practical department of floriculture. The same principle that teaches the promologist to cut down the canes of the raspberry, after the fruiting is over, ought to teach the florist to cut down the stems of the chrysanthemums. It is beggaring the question altogether to talk of the stems sheltering the suckers. Show us, in the first place, that the suckers require shelter, and then we will determine upon the impropriety of the practice of cutting down the stems.

General Directions.—Clear the borders and other flower compartments from all dead annual plants, pulling them up by the roots, such as the African and French marigolds, lavateras, China asters, and all others of the like kind, for these never survive to flower again. Likewise cut down all the dead stems or decayed flower-stalks of perennial plants, and let the borders be well cleaned from the fallen leaves of trees, and all sorts of rubbish and litter. After this give the borders a general clearing and dressing; let them be gone over with a hoe on a dry day, cutting up all remaining weeds, and loosening the general surface, and then rake them smooth, or otherwise let them be neatly dug and raked. This puts a stop to the growth of weeds, and renders the borders clean and decent for the winter season. They will also be clear and ready to receive what other plants may be thought wanting, which may now be planted, of the various hardy sorts that may be required.

THIRD WEEK IN NOVEMBER.

Auriculas.—Give these plants the same attention as last recommended.

Carnations and Picotees.—Slight frosts will not injure these plants. Young florists are apt to cover them too much at this season, which brings on the spot, or mildew, and also a yellow and sickly appearance. Give plenty of air and light; pull off the glasses at every opportunity, and give a moderate supply of water. The plants are growing, and must be kept moist, more particularly the pipings, which will continue to grow as long as the weather is open. Look well for slugs and small snails, and prevent as much mischief as possible by these pests.

Tulips.—We again remind our readers to finish planting the tulips, before the season is too far advanced—severe frost may soon make its appearance and prevent the operation.

Dahlias.—Take advantage of every dry day, and get up the dahlias.

Pinks.—See that the young plants are all firm in the ground, if not, fix them by pressing the soil gently to their roots. Look once more to the labels if of wood, written on with pencil — slight frosts will soon obliterate them.

Fibrous-rooted Flowering Plants.—All sorts of fibrous-rooted perennial and biennial flower plants may now be transplanted into borders, where in a short time they will take root freely. The sorts to plant now are rose campions and sweetwilliams, campanulas and catchfly; and also may be planted, rockets, bachlaris, bulbons, double fever few, antirrhinums, scarlet lychnis, and lychnideas, and many other similar sorts. The above-mentioned plants grow nearly to a height, and are very proper to be planted variedly, more or less towards the front and middle of the borders, &c., where they will make an agreeable appearance in their proper time of flowering, but especially the double kinds. Some of the double wall flowers and stock July flowers, double scarlet lychnis, double sweetwilliams, double rockets, double rose campion, and the like, should be planted in pots and removed to some place where the plants can be sheltered in severe weather. These double flowers deserve particular care.

Columbine, Monkshood, Canterbury Bells, &c.—This is a good time, if the weather be anywise open, to plant columbines, monkshood, Canterbury bells, foxgloves, tree primrose, great valerian, snapdragons, and such like kinds. These flowers generally grow from two to three and four feet high in the different sorts, and should be planted in a varied order; the lowest more or less forward, the others placed similarly towards the middle and back part of the borders, &c. Transplant also wall-flowers and stock July flowers into the borders; and this is also a proper time to plant carnations and pinks, both seedlings and layers.

Crocuses and Snowdrops.—This is a good season to plant the crocuses and snowdrops which were taken out of the ground in summer; also winter aconites. These roots may be planted within about six inches from the edge of the borders or beds next the walls, in one continued row, set about six inches apart, or in little clumps or patches, in which the flowers will make the best appearance, forming the patches about five or six inches over; plant the different sorts separately, four or five roots in each patch—one in the middle, and three or four round the edge. Two or three feet further, plant another clump in the same order, and so on to the end, and in this manner they may be planted both near the edge, and disposed more or less inward, to display a greater diversity when in flower. These small roots should not be planted more than about two inches deep.

NARCISSUSES AND JONQUILS. — Various sorts of narcissuses and jonquils may now be planted, and this is also a proper time to put in the roots of the English and Persian bulbous irises, frittillarias, gladioli, ixias, and all other such like bulbous roots as were taken up when their leaves decayed in summer. When the above roots are intended to be planted separately in beds, let them be set in rows eight or nine inches asunder, and set the roots the same distance from one another in the row, and not more than two or three inches deep. But when they are to be planted in the common borders, it is the best way to plant three, four, or five roots together in a small patch, and allow at least three feet between every such patch of roots.

CROWN IMPERIALS, MARTAGONS, &c— Crown imperial roots, and the roots of martagons and orange lilies, that were taken up when the leaves decayed in summer, may now likewise be planted, and where the white lily, pancratiums, or any similar bulbous lily roots, have been removed since their bloom, and are now above ground, let them be planted in their proper places in the beginning or middle of this month. These bulbs should be planted variedly towards the middle and back part of the common flower borders, they being of tall growth, planting some more or less forward and towards the middle, others more inward in the borders, intermixing the different sorts properly, at one, two, or three yards' distance, and three or four inches deep, observing generally, to open apertures for the large roots with a garden trowel or small spade, planting one good root in a place; or, to have a larger show of bloom, they may be occasionally planted two or three together.

PERENNIAL ASTERS, EVERLASTING SUNFLOWERS, &c. — Where perennial asters, everlasting sunflowers, Michaelmas daisies, golden rod, and other such like large-growing fibrous rooted perennial plants have stood in one place several years without transplanting, their roots will have spread considerably, and will be increased to very large bunches. Where that is the case the roots should now either be slipped or trimmed in all round, as they stand, to a more moderate compass, or wholly taken up, and each main root divided into several parts, or separate offset plants, not too small, and then some of the best should be immediately planted again in the places allotted them, at the distance before mentioned.

EVERGREEN SHRUBS AND TREES.—Evergreen trees and shrubs may now be planted in the clumps or other parts of the garden, where they are required. They may be planted either in distinct clumps, or other shrubbery compartments, to have some wholly of evergreens; and also some in assemblage with deciduous trees and shrubs, in order to produce the greater diversity and variety. Most sorts may be removed in the beginning or the middle of this month, provided the weather be not frosty. In particular, however, may now be planted, the strawberry tree, narbutus, laurel, Portugal laurel, laurustinus, philliareas, alaternus, bays, cistuses, evergreens, oaks, hollies, and magnolias, pines, firs, cedars, cypress, junipers, and many others. In planting these and all other evergreen shrubs or trees, if they are to be planted in clumps, or any continued plantations, let them be set at least four or five feet every way asunder; and some of the larger growing sorts should be allowed a greater distance, for it is of much importance to allow any of these kinds of shrubs and trees a proper distance, as every plant, according to its kind, having room to shoot each way regularly, they will form handsome heads, and every different shrub can also be distinctly viewed. Besides, by allowing a due distance between plant and plant, there will be a proper room left to dig the ground, and also to hoe and clean, and do all necessary work about the shrubs.

ORNAMENTAL FLOWERING SHRUBS. — In occasionally introducing for planting in the principal flower borders any desirable ornamental flowering shrubs, in order to effect a greater decorative variety in an embellishment of those compartments, shrubs should be generally chosen of a moderate growth for that purpose, such as roses, syringas, hypericums, spiræas, honeysuckles, althea frutex, Persian lilacs, guelder rose, mezereons, dwarf almonds laurustinus, arbutus, cistuses, jasmines, rhododendrons, &c., and not planted too close, as too often practised, allotting the smaller at least five or six feet, and larger ones ten or fifteen feet distance; and in their advancing growth, keep them in some regular order below and above, not to overspread the under growing herbaceous flowers of the bulbous, tuberous, and fibrous rooted kinds. The shrubs in general should mostly be kept trained, each with a short stem below, near the ground, and their heads should have occasional pruning every year with the knife, and be always kept somewhat regular, and within some moderate bounds, and all suckers from the roots should be radically taken away in the winter and spring dressing.

WATERING PLANTS.—Water must now be given in a very sparing manner to plants in pots. Few of the plants will be in an active state of vegetation, and, consequently, they should be supplied in very moderate quantities, and at pretty long intervals, perhaps once in eight or ten days. Some may require water oftener, and some kinds may only need a little once in two or three weeks, as all the succulents, and such as may now be termed dormant. Nothing is more pernicious to these plants in winter than damp. They should, therefore, be carefully divested of damped leaves as they appear, and every means should be used to expel humidity or foul air, such as clearing the outsides of pots of green mould, and stirring the surface of the earth with a stick or some other implement.

DIRECTIONS FOR PLANTING TREES.—In planting the various trees and shrubs in the garden, one general method serves for the whole: open for every plant a circular hole, wide enough to receive the root freely every way, and about a spade deep, or according as the root requires, and let the bottom be well loosened. Then, having the plants ready, prune the end of all long and straggling roots, and cut away such as are broken, damaged, or dead; also prune to order any irregularities of the head; then place the plant in the hole upright, break the earth well, and throw it in equally, at the same time shaking the earth gently to make the earth fall in close about and amongst all the roots and fibres; when all is in, tread the earth gently round the plant, and let every one be directly watered, especially if of a light dry soil. But in planting the choice and more tender sorts of evergreens, such as arbutus, magnolia, rhododendrons, &c., it would be of particular advantage where the plants can be readily taken up and brought with balls of earth firmly about their roots; and having a wide hole opened for each, the plants should be immediately set therein with the ball of earth entire, and directly till up the hole, and tread the surface gently. Immediately give each plant about half a pot of water, or according to the size of the hole, and let such as want support be directly staked.

BULBOUS FLOWERS.—The beds of choice hyacinths, jonquils, polyanthuses, narcissuses, tulips, &c., which were planted last month, should, on the apprehension of a severe winter, be covered for their preservation. This is often done by canvas or mats, suspended over hoops, in the manner specified in March and April; but by being too much excluded from the action of the atmosphere, the roots are frequently injured. It is, besides, a method both troublesome and expensive to cover and uncover them as they ought to be in the course of a changeable winter. It is less so, and perhaps they may be as effectually secured, with a covering to the depth of two inches of sawdust, not resinous, and fine sheer sand, mixed in equal quantities; or they may be covered to the depth of three or four inches, with one-fourth part sand, and three-fourths rotten stable dung, well mixed together, which, besides preserving, would act as a manure to them.

FOURTH WEEK IN NOVEMBER.

AURICULAS.—Continue to give air to auriculas, by drawing off the lights in fine open weather, and give water sparingly where the ground is getting dry; look now and then for slugs, they secrete themselves underneath the bottoms of the pots; if very troublesome remove the pots, and sprinkle the bottom of the frame with powdered slaked lime.

CARNATIONS AND PICOTEES.—Pick off decayed foliage, keep the plants clean, and loosen the surface of the soil, where you observe it getting close.

DAHLIAS.—Taking up dahlias should now be brought to a close. Dahlia seed not quite ripe will ripen if cut with a portion of the branch attached to it, and hung in a dry, airy situation, out of the reach of frost.

CULTURE OF SPRING FLOWERING BULBS.—Spring flowering bulbs should be replanted in September or October. Those of the summer in October or November, and those of Autumn in July and August. A little before or after is not very material, only where they are put in too soon, the spring ones come so forward as to be liable to be damaged in severe winters and springs, and when kept out of the ground too long, the bulbs spend themselves fast in making roots. The scaly bulbs, as lilies, should not be kept out of the ground above a month or six weeks. Those that flower in summer may be put in the ground at different times, as early and late in autumn, and early in the new year, not later than February, to obtain a succession of blow. If any be put in at the end of February or beginning of March, they should remain two years for increase. This is the common practice with the anemones and ranunculuses, but when planted in winter, the soil should be a dry one, or made so by digging in a good quantity of fine seacoal ashes, and coarse or drift sand, else they are apt to rot if much wet falls before they have started fibres, especially when followed by sharp frosts. They may be protected from wet by mats, and from frost by peas haulm, or wheat straw.

Care of Newly Planted Trees.—Newly planted trees and tall shrubs should be neatly fastened to stakes with a soft bandage, so as not to pinch or bruise the bark; where this has been neglected, many trees have failed to put forth new roots, by having been shaken by the wind, particularly in exposed situations. Care should be taken to lay some mats over the roots, to prevent hard frosts from penetrating them, particularly those which are rather of a tender nature. Plants in pots, whether of the tree, shrub, or herbaceous kinds, should be removed to warm situations, and have the pots plunged in the ground, to protect them from frost, and be covered with mats, &c., whilst those of a more tender nature may be indulged with a frame, and glasses, giving them air only occasionally.

Shrubberies and Flower Borders.—At the end of this month, during open weather, the shrubberies, clumps, and flower borders may be dug up round each plant, particularly towards the fronts and near the walks, which will destroy the weeds, be a great benefit to the plants, and give a clean, neat appearance to the whole plantation. The borders which are vacant may now be dug or trenched up, as also the ground where new plantations are intended to be made in the spring, observing to take out all roots of weeds, breaking the clods of earth, and forming the earth up into sharp ridges in order that they may receive the benefit of the sun, air, and frosts.

Grass Walks and Lawns.—If the grass walks and lawns were not mown last month, it should be done in this; frequently brush over the worm casts with a pole in moist weather, which should be taken off by a wooden roller; in dry weather it must be often rolled with one of stone or iron; where any leaves are scattered about they should be swept off and taken entirely away.

Gravel Walks.—The gravel walks should often be cleared from leaves and other litter, and occasionally rolled; as few weeds now appear, these should be taken out, and the frequent rolling will prevent others from rising, or the surface being overrun with moss; this is much more eligible than to throw the walks up into ridges for the winter, with an intention to kill the weeds, and prevent their seeds from vegetating, since this would tend rather to promote their future growth, besides rendering the gravel unfit to walk upon.

Plants in Pots.—Take good care, now, of all such shrubs as are in pots, particularly the more tender kinds, to defend them in severe weather. In order to protect the roots better from frost, let the pots of shrubs in general, if not done before, be plunged up to their rims in a dry, warm, sheltered compartment, and the more tender and curious kinds, such as any small arbutus, magnolias, cistus, African heaths, China aster, &c., in pots, should be placed in deep frames to have occasional shelter or covering in frosty weather. Likewise the pots of herbaceous, perennial and biennial flowers, such as double rocket, double rose campeon, double scarlet lychnis, double sweet-williams, double wall-flowers, double stocks, and other hardy perennial fibrous-rooted plants in pots, as also pots of bulbous roots, where not moved to some place of shelter last month, should now be done, placing some of the principal sorts in frames, &c., either in a warm sheltered situation, or some plunged to their rims in a dry warm spot of ground, to prevent the frosts entering at the sides of the pots to hurt their roots; and in very hard frosts it will be proper to lay some long dry litter lightly over the whole. But where there are any frames to spare, have the pots of some principal sorts of the above kinds of plants placed therein, and defended occasionally with the glasses; it will be found of great advantage.

Operations in the Greenhouse.—Look over the plants carefully every other day, to see if any of them stand in need of water, and if you perceive any of them beginning to be dry, give them a moderate watering. Pick off from the plants all the dead and decaying leaves, and suffer not any weeds to grow in the pots. If the nights be cold and damp, make gentle fires in the evening, and in very cold days, just to keep the house dry, that the plants may not be affected by the damp; give the house plenty of air in fine sunshiny days, and in mild weather, and when you have fires, keep a draught of air constantly through it, even during the night, which will prevent the effluvia that arises from the flues injuring the plants. If you have greenhouse plants, or cuttings of greenhouse plants, of any kind in frames, give them air in fine weather, and if the nights be cold, cover them up with mats. If you have any room in the greenhouse, set in some young China roses, mignonette, stocks, and any other kinds of flowering plants in pots that may require protection from the cold weather in winter. If you have any unsightly myrtles, or other hardy greenhouse plants, they may be turned out of their pots into the ground in a sheltered situation; prevent the frost from getting to their roots by mulching; cover them with mats in hard frosts, and they may, perhaps, survive the winter.

PROPAGATION OF SHRUBS BY SUCKERS FROM THE ROOTS.—The suckers of such shrubs as it is wanted to propagate, may be taken up with the roots, and planted in nursery rows in an open compartment. They will make good plants in two years, or rose suckers may be occasionally planted in a hedge border along the front or back of a border, to be trained in a dwarf or low hedge, to produce large supplies of flowers for medicinal, domestic occasions, or other purposes. Rosanas have lately become a very interesting feature in flower gardens. The sdecies and varieties are now so numerous, and being transplanted and pruned at different seasons, a bloom may be obtained almost all the year round. These rosanas are arranged in clumps upon turf, or in borders of any form or extent. Sometimes low hedges are formed of dwarf roses, round clumps, or to mark the compartments of the flower garden. When thus disposed, they are generally pruned low, and diversified with tree roses of various heights. Another device is to train the strong growing and climbing sorts upon pyramidal frames of wood erected for the purpose.

HYACINTHS, TULIPS, ANEMONES, &C.—The beds of choice hyacinths, tulips, and anemones, should be well defended from frosty weather. Those early planted beds, whose young buds appear above ground, should have some litter of a dry strong nature, or dry fern, thrown over them during the severe frost, and the beds of the most valuable sorts should have hoop-sticks erected over them, and covered with mats or canvas. The anemones and ranunculuses of the most valuable sorts, in beds, will also demand the same protection.

AURICULAS AND CARNATIONS.—Our attention should be given to the pots of auriculas and carnations, by protecting them from heavy rains, snow, or severe frost; those which are not sheltered with slopes, should have hoops arched over them, and covered with mats. Where the plants of either kind are placed in frames under glasses, in bad weather, they should be kept constantly shut. Whenever any weeds appear they must be taken out, and all decaved leaves plucked off. Let the earth be stirred on the surface, in order to refresh the plants, and those pots which are laid on their sides under a south wall, in bad weather, should be turned round, which will much assist in keeping the plants dry; when it is fine and mild, they may be placed upright until the weather changes. The late layers not taken off from the old plant should also be guarded from receiving too much moisture at this season.

SEEDLING PLANTS.—Small young tender seedling flower plants, or roots, demand particular care at this generally unfavourable season. Such young tenderish kinds as are in pots or boxes, may now, if not done before, be in some degree protected by placing the pots, tubs, or boxes in a warm border, or they may be plunged into the ground, and, in hard frost, long straw litter may be laid on the surface and around the sides. The same protection of covering may also be given to such as are in beds.

FRUIT GARDEN.

FIRST WEEK IN NOVEMBER.

VINES.—In the course of this month, vines should undergo a general pruning and nailing. Let the principal branches be examined, to ascertain if they be fully supplied with shoots of last summer's growth. When the tree is too much crowded, the superfluous branches should be cut out, and those which have extended too far be shortened. A part of the former bearers, and old naked branches, should always be cut out to make room for a supply of annual fruit bearing shoots, making choice for this purpose of those which are strongest, and best situated, and have the shortest joints, training them in from eight to twelve inches asunder, at the same time shortening them to five or six eyes, according to their strength, and the size of their foliage. The principal business in pruning vines, is to have a constant succession of young wood over the whole tree, so as to have in every part young shoots, both for bearing, and to supply any old naked branches which require to be taken out. When the pruning is finished, the branches should be trained and nailed to the wall, at the distance of from eight or nine inches to a foot from each other, in a regular and straight manner, in every direction from the bottom of the plant.

PLANTING PEACHES, NECTARINES, PLUMS, APRICOTS, CHERRIES, PEARS, APPLES, &C.—The different kinds of wall trees may now be planted either in places where others have failed, or in new plantations. When a few vacancies are to be supplied in a border, let the place opened for this purpose be replenished with some fresh earth of a loamy nature, and intermixed with rotten dung; but if a border be entirely planted it should be trenched up two spades deep, and if the soil be of a light sandy nature, an addition of some strong loam from a common, with an intermixture of rotten dung, will be very advantageous to the growth of the young plantation, always making choice of a south wall for the finer kinds of fruit trees, as peaches, nectarines, apricots, and grapes. The plums, cherries, &c., may occupy the walls facing the other quarters, even the north, to produce late fruit, in order to prolong the season of gathering.

Plant Walnuts.—This is a proper season to plant walnuts, where there is room for the trees to expand their large spreading heads. Make choice of those nuts which are thin shelled, and can easily be cracked. In four or five years the trees arising from these nuts will be fit to be finally planted out, in rows forty or fifty feet asunder, in any open places where there is room for them, or in parks in groups of three or four trees, at proper distances from each other, always suffering their branches to take their natural growth.

Quinces.—Quince trees, as they delight in moisture, may be planted on standards by the sides of ponds, ditches, and other moist places, or may be trained as other dwarf fruit trees, and planted on espaliers, observing to cut out those branches which cross each other, and to keep them clear from suckers.

Plant Mulberries. — Mulberries may now be planted, either for standards or trained dwarf for espaliers.

Gooseberry and Currant Trees.—Gooseberry and currant trees may still be planted in rows about eight feet asunder, and six from each other in the row for a full plantation, or they may be planted near the walks of the kitchen garden in a single row, at the above distance from each other.

Barberry.—Suckers of the barberry bush may now be planted, either to form hedges, or trained singly with a stem three or four feet high, and allowed to branch out into a head, only cutting out any rambling and luxuriant shoots; they may also be allowed a space in the different shrubberies.

Fig Trees.—The fig trees should now be examined, and the green fruit of the autumn produce picked off, lest they rot and damage the buds intended for bearing shoots the following year. Let all those shoots and branches projecting from the wall be nailed up close, but by no means prune those trees before the spring, for fig trees in severe winters are liable to be easily injured, on which account they should be covered with mats or branches of evergreens.

Medlars. — Medlar trees may now be planted either as standards or dwarfs; if as standards, their distance should not be less than twenty or twenty-five feet apart, but when the dwarfs are trained to espaliers, the fruit will be considerably larger. Observe not to shorten the bearing shoots, as the fruit is produced at the extremity of their branches. These trees will grow almost in any soil.

Filbert Trees, and Hazel Nuts.—The present month is a proper time to plant either layers or suckers of the large woodnut, cobnut, and filbert, of two varieties, one with red, the other with white skins. These trees will thrive in any situation or soil, and may be trained as full standards or dwarfs.

SECOND WEEK IN NOVEMBER.

Standard Fruit Trees.—Standard apples, pears, plums, cherries, and other fruit trees of all sorts, may now be brought in and planted any time this month in mild weather.

Plum and Cherry Trees in Espaliers.—In the course of this month plum and cherry trees may be planted either against walls, espaliers, or on standards. The distance they will require to be planted, on espaliers or walls, should not be less than fifteen or eighteen feet, to give them room to expand in a proper horizontal manner, as the shoots of these trees should not be shortened. The trees proper for this purpose should be from two to five years old from the time of their grafting or budding: as soon as they are planted, some stakes, placed in the range of the row, must be driven in the ground, to which the branches should be tied with osier twigs, and conducted horizontally.

Prune Gooseberry and Currant Trees.—Any time this month gooseberry and currant trees may be pruned, by cutting out all superfluous shoots, reducing irregular, ill-placed, or decayed branches, as well as those which stand too close to each other. The branches, indeed, ought never to approach nearer each other than five or six inches at their extremities, so that the air and sun may be freely admitted, by which means the size and flavour of the fruit will be greatly improved.

Prune and Plant Raspberries.—Raspberries may be pruned any time this month, by breaking or cutting down the decayed stems that bore fruit the foregoing summer; then the young successional plants, by clearing away all the intermediate suckers between those of the principal stocks reserving only four or five of the strongest. When this is finished, and the rubbish cleared away, let the ground between the rows be dug up, and all straggling suckers taken up by their roots, and the strongest reserved for a new plantation.

Strawberry Beds.—If the strawberry beds were not cleared last month, they should be done this, during dry weather. Let the runners and strings be cleared away close to the principal plant; clean the beds from weeds and take away the litter; then let the earth be loosened about the plants, and spread a little very rotten dung over the beds; afterwards dig up the alleys, and throw likewise some of the earth over the beds. New plantations of strawberries may yet be made; the earlier, however, in the month, the better.

Management of Ground for Orchard Trees.—If the cultivation of orchard fruits be industriously followed, the ground amongst the trees should be dug and kept with the hoe, for the first seven or eight years after planting. In order to defray the expense incurred in doing so, it is very proper to crop the ground with vegetables to a certain extent, but by no means to such an extent as to injure the trees.

THIRD WEEK IN NOVEMBER.

Pruning Standard Fruit Trees.—Standard apple and pear trees, and all other standard fruit trees, both in gardens and orchards, may now have every necessary pruning, in order to reform casual irregularities, very crowding branches, and to cut out any decayed wood and worn-out bearers. But this pruning in standards is not required every year, as in wall and espalier trees, whereby to preserve the regularity of their requisite fan-form expansion, being only necessary occasionally to correct casual disorder, probably once in several years. For example, where a branch runs in a disorderly rambling growth across the others, it should either be cut out or pruned down to some lateral one of proper regularity, or else, where any branches are two crowdedly close, let the most irregular be cut out thinningly, in an orderly manner; as, likewise, let any of a very ill-formed, awkward growth be reduced to order conformably to the general expansion, either pruned to some regular lateral branch or quite cut out; where it is very disorderly, then in the whole reducing the casual irregularities, and the trees will thereby be preserved in a handsome growth and good fruitful state, in a superior degree of perfection.

Gooseberry and Currant Trees.—Gooseberry and currant trees may be planted any time this month; and some good full-headed plants should be procured, of proper growth, for immediate bearers the ensuing season, which may be obtained abundantly at all the nurseries. As these trees grow up, it would generally be proper in the standard bushes to train each with a clean single stem below, six or eight to ten or twelve inches, then to let them branch out fully above. Likewise let all suckers be constantly taken up as they rise from the roots, for they disfigure the tree, and run up and crowd the general branches of the head, which is detrimental to the production of fruit.

Apricot and Peach Trees.—The apricot peach, and nectarine trees may be pruned any time this month; the old and decayed branches should be cut out to make room for others more capable of producing fruit; the shoots of last summer's growth should likewise be thinned out, and all luxuriant and irregular shoots be pruned, excepting where a vacancy or opening requires to be filled up. The shoots left for bearing must be shortened according to their strength, but the winter management of these trees is not completed until they are properly trained and nailed to the wall, which should be done as soon as the tree is cut, though by some the branches are left loose until the spring; this practice, however, cannot be recommended, for, besides the slovenly appearance of the trees during winter, the branches are liable to be broken by violent winds or heavy snows; and as sometimes in a warm spring buds appear even in this situation, many of them will be nipped off in fastening up the branches.

Raspberries.—If this fruit be in request, now is a good season for making plantations. Take strong well-rooted suckers from the old plants. Plant them in good deep rich soil, about four feet from row to row, and put three or four plants in clusters in the row, three feet apart. Raspberries may still be pruned.

General Planting of Fruit Trees.—This being a most eligible season for planting fruit trees in general, take the earliest opportunity to procure them in the public nurseries, in the best state of growth, either for walls, espaliers or standards, as may be required, selecting them with good proper heads, of a free regular growth according to age, either of only one year's advance, or, preferably, of two or three years' shoots, or more, of larger and fuller expansion, or some occasionally of four, five, or six years' growth, advanced to a fruiting state, for immediate bearers the ensuing summer; in all of which it would be of importance to have them taken up with their full spread of roots, all as entire as possible.

FOURTH WEEK IN NOVEMBER.

Plant Apples, Pears, Plums, and Cherries.—Apple, pear, plum, and cherry trees, either for espaliers or standards, should now be planted where they are wanting; and this may be done any time this month, provided the weather be open. By planting and training these trees in espaliers and against walls, their fruit is greatly improved in size, beauty, and flavour, though apples are rarely indulged with a wall; but all tho others are planted as wall and espalier trees, as well as for standards. However, it would also be eligible to have some choice eating apples, such as golden pippins, golden rennets, overdrop, &c., planted against a warm wall, in order to obtain earlier fruit and of improved flavour. Where the above trees are to be planted against walls or espaliers, do not forget to allow them proper room; for this has often been forgotten in making new plantations, and we very often see them planted so close together that by tho time the trees begin to bear tolerably their branches have met, and they have encumbered one another. The proper distance for general planting is this—let the trees which are to be planted against walls and espaliers be set at least fifteen or eighteen feet distant, but eighteen or twenty would bo eligible for apples and pears, especially such as are grafted or budded upon free stocks—pears in particular; twenty feet at least will be an eligible distance in walls and espaliers. And plum and cherry trees, for walls and espaliers, should be planted at least twelve or fifteen feet distance, or not more than eighteen. Let the border for the wall and espalier trees, if for a full or general plantation, be dug or trenched two spades deep, or one full spade at least; or previously, if the soil be very poor, apply some rotten dung; and dig in a good spade deep; only where some occasional trees are wanted, so that the ground be in proper cultivation. The place for each tree may at the present time bo prepared, or the holes dug for their reception or planting; but where the earth of the border is naturally good, some fresh surface loam, if it can be obtained, or other good earth applied, would be particularly beneficial to the first growth of the young trees intended for planting, or if only for the present, two or three wheelbarrowsful to the place for each tree, preferring that of a loamy nature where attainable, in which the majority of fruit trees grow prosperously.

Gooseberry and Currant Trees.—Where gooseberry and currant trees are yet unpruned, it may still be done, observing to keep the branches at proper distances from each other, as directed in the former months, cutting out all irregular and straggling branches, thinning out those which grow too thick and crowded, particularly in tho middle part of the bush, and all decayed wood and useless branches. Those currants and gooseberries trained against walls, pales, &c., should also be pruned and parted; these should branch out from the bottom of the plants, all foresight shoots being taken off, and the branches trained horizontally, leaving all the fruit-bearing spars, and cutting off all dead wood, or any other snags projecting outwards; and if any branches become deficient in bearing, they may be cut out, and younger ones trained in their room; afterwards let the tree be regularly nailed up, as directed in the former months.

Fig Trees.—Take off all the autumnal figs, otherwise they will rot and destroy the shoots. All projecting shoots may be closely nailed up to the wall, but the pruning of these trees should be deferred until the spring. When the weather proves severe, these trees should even be protected with mats, lest the fruit-bearing shoots be damaged.

Plant Fruit Trees.—When the weather is open most kinds of fruit trees may still bo transplanted, particularly where there is a necessity for their being removed, and if the ground bo of a dry nature where they are to be planted; but if the land be of a stiff, clayey texture, or the weather proves very frosty, it will be more eligible to defer this business till February.

Care of Fruit Tree Borders.—If the weather provo open, and the borders where fruit trees are growing require the assistance of manuring and digging, it should now be performed, particularly in a poor, worn out soil, which may be amended by the employment of some fresh earth from a common, intermixed with rotten dung. This mixture should be spread all over the border, and well dug in with a three-pronged fork to prevent tho roots being cut; this dressing will considerably assist the trees, particularly those in a weak state. Those borders, the soil of which is of a tolerably good quality, may be kept in a proper state by the application of dung only once in two years. In open weather, when new fruit tree borders are intended, let them now be well trenched, taking out all the roots of obnoxious weeds, and if the soil will admit to be turned two spades deep, the plantation will thrive much the better. Where wall trees appear in a sickly state, the earth may be removed from about their roots, and replaced with some rich, loamy earth, intermixed with rotten dung, this will greatly assist towards the recovery of the tree; but the best remedy will be to take it up and replace it with a trained tree of another sort, particularly with peach or nectarine trees.

STRAWBERRY BEDS. — Those strawberry beds which were not cleared in the last month, should now have it done, before the frosts set in, clearing away from the principal plant all strings and small shoots, likewise any weeds or litter; dig up the paths and scatter the mould between the plants; this will give the bed a clean appearance, and assist tho future growth and produce of these plants.

KITCHEN GARDEN.

FIRST WEEK IN NOVEMBER.

GENERAL DIRECTIONS.—Attention should now be paid to neatness and order, as well as during the former months. The walks in and connected with the culinary garden should be particularly neat, and in dry days they should be frequently rolled, to keep the surface even and agreeable to walk upon, as well as to keep down worm casts, which at this season are often troublesome. Roots of all kinds intended for winter supply should now be taken up and housed, as directed last month, for after this time they will not increase in growth, and some of them, such as beet, will be damaged in quality if kept too long in the ground. Take advantage of dry days and frosty weather, and bring in rotten dung from old hotbeds, or from dunghills, and lay it upon such vacant pieces of kitchen ground as want manure. Likewise now dig or trench up all such pieces of ground as are vacant; and in order that the ground may receive the true advantage of fallow, let every piece, as you dig or trench it, be laid up in narrow ridges, and, when manured or dunged, let the dung be dug in regularly one spade deep. By digging the vacant pieces of ground in the winter season, it is not only an advantage to the soil, but it also looks neat, and will greatly forward the business in the spring, when there is always a deal of other work on hand. The ground being laid up in ridges, it is soon levelled down in the spring, when it is wanted for the reception of seeds or plants, beneficially improved in a mellow, fertilised spot, for the advantage of the respective crops.

ARTICHOKES.—In this month, artichokes should have their leaves cut off close to the ground, and the roots earthed up, to prevent their being destroyed by severe frosts.

ASPARAGUS. — Asparagus roots yield a great deal of vegetable matter in the course of the season, therefore this must exhaust the ground on which it grows, and being a perennial plant, not often renewed by sowing or planting, it requires a proportional quantity of good manure to support it. Good stable-dung, which has not been exhausted in hotbeds, should be chosen, and put on in quantity according to its quality, from six to twelve inches. The rains in winter will wash the juices of the dung down to the roots. Where sea weed can be procured, it is probably the best manure for asparagus, but where that cannot be got, salt may be used with the dung; its parts will descend more gradually, along with the juices of the dung, than when applied as a sample.

BEANS.—The beginning or the middle of this month is a proper season to sow some early beans, either to succeed such as were planted in October, or, if no sowings were then made, it may now be done very successfully. The beans which are planted now will come in at an early season, and often succeed better than those which were planted three weeks or a month sooner. The magazan bean comes in the earliest, is a great bearer, a good bean for the table whilst young, and most proper to be planted at this season for the earliest crop.

BROCOLI.—It is an old, but nevertheless an excellent practice, to take up part at least of the late-growing sorts, disturbing their roots as little as possible, and to lay them in slopingly, with their heads towards the north, only a few inches above the ground, and about two feet apart. By this means the crown of the plant, lying low, escapes the cutting winds and severest frosts, and at the same time has a chance of being protected by snow, which usually falls previously to great frosts. The check the plant sustains in consequence of being taken up has a tendency to render the fibres much tougher and less susceptible to the action of cold.

CABBAGE AND COLEWORT PLANTS. — In the beginning of this month finish the planting of some cabbage plants of the early kinds, if not done in October, to come forward next spring and summer in April, May, &c. Choose strong, good plants, and set them in rows eighteen inches or two feet asunder. Likewise finish planting coleworts for the spring supply, setting them in rows, twelve by six or eight inches distant. Hoe and loosen the ground between the rows of cabbages and coleworts planted the last two months, which will kill both weeds and vermin, and greatly assist the growth of the plants.

CARROT SEED.—Dig a warm border the beginning or middle of this month, and sow in it some carrot seed, to have a chance of obtaining a few early young carrots in the spring.

CAULIFLOWER PLANTS.—Let the cauliflower plants which are in frames to stand the winter have the free air every day, when the weather is mild and dry, by taking the glasses quite off in the morning, but let the plants be covered with them every night. When the weather is extremely wet, it will be proper to keep the glasses over them; but at the same time, if mild weather, let the glasses be raised two or three inches or more behind or in front to admit a large share of free air to the plants.

CELERY.—All the advanced crops of celery should now be fully earthed up a considerable height for blanching, and to preserve the plants from frost.

CHARDOONS.—Finish earthing up chardoons as they advance in height. First gather their leaves up even and close, and tie them together with a hayband, then let the earth be well broken and laid up round each plant to a good height. Let this work be performed on a dry, mild day, and when the leaves of the plants are perfectly dry, otherwise they will rot in the heart.

LETTUCES.—In fine, dry weather let the lettuce plants in frames enjoy the full benefit of the air, by taking off the glasses in the daytime, and even in wet weather they should be raised two or three inches at the back. The earth should also be stirred about them, and all dead leaves taken off as they appear; and during frosty weather the glasses should not only be kept closely shut, but mats ought to be thrown over them, to protect the plants from its severity: those under bell or hand-glasses require the same treatment.

MUSHROOMS.—The mushroom beds that were spawned the previous months will now require attention. They should be examined every two or three days, for the heat in them will be affected by the variableness of the external air. In windy or frosty weather they will require larger coverings than in mild weather, particularly if they be in the open air. They should be uncovered about once a week, and the surface of them cleared of any damp litter or mouldiness that may happen to be on it. The mushrooms of those that are in bearing should be gathered before they be too old, and the beds must be covered up according to the heat found in them, or to suit them to the temperature of the weather.

ONIONS.—Take care now of the young winter onions; where weeds appear, let them be picked out with care.

PEAS.—Peas may now be sown to succeed those sown in October, that there may be a regular supply of these for the table in their due season. But if none were sown in October, it will be proper to sow some the beginning of this month.

RADISHES.—About the beginning or towards the middle, or any time of this month, some short-topped radish seed may be sown, and if they survive the frost they will come in early in the spring. There is, however, but little dependance on this crop succeeding, but still, when these things are desired early, it will be proper to sow a few and let them take their chance.

SEA KALE.—The beds of young sea kale that are not intended to be forced, should be covered up. The beds intended for cutting in spring should be also forked up, and covered from ten to fifteen inches with leaves, which will now be in abundance, covering the strong and old roots thicker than the young and weak ones. A few branches or old boards may be laid over the whole to prevent the leaves being blown away, and they will require no further attention till spring, when they will be fit for cutting.

THE SECOND WEEK IN NOVEMBER.

ARTICHOKES.—Artichokes should now have their final winter-dressing, by cutting down the large leaves, and so dig between, and earth up over the rows, both to guard the crown of the roots and heart of the plants from severe frosts.

ASPARAGUS.—Cut down the stems of the asparagus, if it were not done last month. Clear the beds of weeds and litter of all kinds. Spread rotten dung on the beds, and earth them up.

BROCOLI.—Brocoli and all kinds of cabbages should now have the earth drawn up as high as it will lie to the stems of them.

(Continued on page 338.)

THE IMPERIAL MARTAGON,

OR,

MARTAGON LILY WITH REFLEX FLOWERS.—*(See p. 346.)*

THE COMMON PEONY.—(See p. 312.)

KITCHEN GARDEN.

CONTINUED.

Carrots, Parsnips, &c.—The beginning of this month carrots, parsnips, and other kitchen roots should be taken up, in order to preserve them for winter use.

Cauliflowers.—In the beginning of this month the remaining cauliflower plants should be placed out where they are intended to remain during the winter; those under the hand or bell glasses should have the benefit of the air. Let the glasses be taken off in warm weather from eleven to three o'clock, and, even when the weather proves less favourable, they may be raised a little on one side. When the stems are advanced some length above the surface of the ground, let some fresh earth be laid about them to strengthen and refresh the plants. The cauliflower plants in the frames require the same care; but in wet weather the glasses should be tilted up at the back, instead of the front, in order to allow the rain to pass off; the earth should also be stirred beneath the plants, the weeds pulled out, and all decayed leaves stripped off.

Celery.—In dry weather continue to earth up the rows of celery as they advance in height, taking care, in banking up the plants, not to throw the earth into their hearts, and to smooth it up with the back of the spade, so that any rain which happens to fall may the more readily pass off.

Endive.—In open weather take the opportunity of a dry day to blanch endive to succeed those of the last month.

Mushrooms.—The mushroom beds must be still attended to, and if rain has made its way through the covering, it should be taken off, and the bed exposed on a fine day to dry, after which it should be again covered with fresh straw, at least a foot thick.

Onions.—This is a very proper season to prepare ground for onions to be sown in March. For this purpose a dry day should be chosen, and when the ground is also dry; the dung, which should be very rotten, is to be regularly spread over the surface, and dug in, leaving the surface as rough as possible, so that the action of the frost may the more completely take effect upon it.

Peas.—Sow some peas at this time, to succeed those planted in October. In order to have them, without forcing, a week or ten days earlier than the common way of sowing, or than the rigour of our winter will admit, is an object well worth a little additional labour. The following is the plan to be adopted. About the 14th of this month provide as many twenty-four sized pots as a full sized melon frame will hold; fill them up to the brims; divide them by pieces of broken glass, slates, or pieces of old oak poles cut to proper lengths; on each side of these divisions make shallow drills with the fore and middle fingers of each hand united; in these sow the peas and cover up. The pots are next to be plunged in the frame, at about ten inches from the glass. Here they must remain all the winter; and during that time will only require to be defended from mice and birds by traps, and from frost by keeping on the lights, and, if very severe, by a mat or two. As soon as winter is past, and the milder weather of the month of March promises safety, turn out the peas in the place designed for their reception—the best situation is close under a south wall; there dig a narrow border, laying the well-broken earth slopingly up to the wall. Make a trench six inches deep; take the plants out of the pots, and place them in the open trench. In ordinary seasons they will produce pods about the 1st of May, and always a week or ten days before such as have stood out all the winter.

Potatoes.—Where potatoes still remain in the ground, let them now be taken up as soon as possible, before severe frosts begin.

Sea Kale, to force.—The leaves should be trimmed off the plants intended for forcing, the ground gently forked up amongst them, and an inch or two of sand, fine gravel, or light earth laid over the crowns of the roots, about the second week in this month. If the shoots be intended for the table against Christmas, collect a sufficient quantity of stable litter, which should be thrown in a heap, and slightly fermented as for a hotbed. Blanching pots for this esculent are now almost in general use, but garden pots of the largest size answer nearly as well. Let the pots be placed in the lines of the sea-kale, as close to each other as convenient, according to the distance at which the roots or shoots of the plants are situated, pressing the pots firmly in the ground, and if garden pots be used, stopping each hole closely with a cork, in order to keep the dung and steam out. Then fill the intervals of the rows with litter, gently treading it, or beating it with a fork, and raise the whole to the height of six or nine inches above the tops of the covers. If the weather be not severe the shoots will be fit for use within three weeks. When the shoots have sprung six or eight inches, they are fit for use, and should be carefully cut off. If the plants push a flower stalk, let it be cut away as low as possible. In March, or as soon as the plants have done producing, let the covers and the dung be removed, and the ground about them lightly pointed over with the spade or the fork, as practised in the spring dressing of asparagus, or of sea-kale not forced.

Small Salad Herbs.—Sow the different kinds of small salading, where still in request, at this season, in which, if required in constant succession, some should now be sown once a week or a fortnight. The principal sorts are cresses, mustard, rape, and radish, also cos cabbage lettuce, to cut for use in young growth. Where it was not done last month, it will now, for the greater certainty of raising these herbs, be proper to prepare for the seeds a bed of rich, light earth, in a warm situation, the length and width of one or more garden frames, observing the frames for this occasion should be of the shallowest kind, so that the surface of the bed may be as near the glasses as possible, as this will be a greater advantage to the growth of the seed and plants.

Spinach. — When spinach stands too thick, some of the weakest plants may be thinned out. The ground should be kept free from weeds, and the mould stirred up between them, which will encourage the growth of the plants. The outside leaves should always be gathered, and the inner ones left to enlarge, so that there may be a succession of full-sized leaves at any time for gathering.

Turnips.—If the roots be not already housed, it should now be done; they will keep well by being put into a heap, if the place be exposed, covered with a little straw.

General Directions.—In dry or frosty weather remove the dung of old hotbeds, &c., to the vacant pieces of ground that require manure, and spread it in a regular manner. Trenching and digging should also be continued at all opportunities, observing to lay the ground in sharp ridges; and if it will admit of digging two spades depth, the better, particularly where the seeds of lap-rooted plants are to be sown, such as carrots, parsnips, &c. Where the ground is shallow, the dung and the top of the mould should be pared into the trench, and a full spade's depth thrown over it, shovelling up the loose earth, so as to form the top of the ridge. By this early dressing the spring business will be forwarded, and the earth mellowed and enriched by frost, snow, &c, and readily levelled down for the reception of the crops.

THIRD WEEK IN NOVEMBER.

Asparagus.—Where the asparagus beds were not cleared and earthed up last month, it must now be done. This should not be delayed beyond the middle of this month; cut down the stems or haulms of the asparagus close to the surface of the ground, and let these be directly carried away. Then, with a sharp hoe, let all weeds on the beds be cut up, and at the same time draw them off into the alleys. Then set the line, and with a spade mark out the alleys between the beds, about eighteen inches or two feet wide; this done, let the alleys be dug out lengthways, one moderate spade deep, and lay a good portion of the earth of each alley to the right and left equally over the beds, and as you proceed, let the weeds which were drawn off the beds be dug into the bottom of the alleys a proper depth under the earth, leaving the surface regular and even, and let the edge of every bed be made full and straight.

Beans.—If beans were planted in October, another crop should be put in the ground towards the middle or end of this month, either to succeed those first planted, or to supply their place in case of failure. The magazan bean is the best sort to plant in this month; they will require a warm situation, and must be planted as directed in the last month.

Beet.—Now take up the red beet, and store it for winter use.

Brocoli.—Give now a general hoeing in dry days to the younger late planted brocoli, cabbage, coleworts, savoys, borecole, and all the young cabbage tribe, both for the purpose of killing weeds and to loosen the soil. At this time, and not later in the season, begin laying down brocoli, the tall growing sorts particularly. The work is performed as follows: dig away a spit from the north side of the row, as close to the roots as possible, laying the earth in the firm ground beyond, smoothing it down slopingly for the heads of the plants to rest upon, then thrusting in the spade sufficiently deep behind the stems, and at such a distance as will contain the whole volume of root; press forward the whole mass, so that the plant may lean against the earth first thrown out, filling in between, and covering the stems up to the hulls of the leaves. This operation saves many a good crop. When the heads are laid to face the south, they are often lost by the sun melting the snow or frost in the day, on the centre leaves or flower, which, if again frozen on the succeeding night, destroys them.

Cabbage Plants and Coleworts.—About the middle of this month, if the weather be not frosty, place some of the strongest early cabbage plants in the spot where they are to remain. Choose a piece of good ground for these plants, in a situation full to the sun, and let some good rotten dung be applied. The plants are to be planted in rows two feet distant in the row, and allow the same distance between the rows, which will be room enough for this early plantation, as most of them will be used before they grow to any considerable size.

Celery.—Some of the most forward celery, on the apprehension of severe weather, should be covered up with dry bean haulm, or with weeds, which are preferable, that it may be readily come at daily when wanted. The latter crops intended for a spring supply may be left to take their chance of the weather, as they might be injured by being too long excluded from the air.

Endive.—Draw up some of the best and largest plants, on a dry, mild day, with full roots, and any adhering mould together, and lay them in a dry, airy place for a day or two to drain off the wet between the leaves. Then either raise a ridge of dry light earth, sloping to the sun, and place a garden frame thereon, or lay a quantity of light dry mould in a deep frame, raised on a high ridge behind, sloping to the sun as before mentioned; then, having the endive ready, tie the leaves evenly together, plunge the lower parts of the plants into the earth, and generally defend them with glasses placed in the frames, especially in rainy and frosty weather, and use other covering occasionally; or, for want of frames, some earth may be laid in a dry, open shed, raising the earth in a high ridge, or round sloping heap, and so plant the endive therein as formerly described.

Lettuces.—Lettuces for the winter service, of the August or early September sowing, should now be planted out in beds of rich light earth, in a sheltered situation, six or eight inches asunder; they will supply the table before and after Christmas; or some may be planted under bell or hand glasses, or pricked under those where cauliflowers are planted, placing them outside of the cauliflower plants. In the spring they must be transplanted into open ground, in a warm situation, and then place a low awning across, and cover with mats occasionally, in cold nights, heavy rains, frosty and other inclement weather; or, for want of the above conveniences, prick out a number in a south border, close under the wall.

Mint and Tarragon for Winter use.—Where young mint and tarragon are required in the winter season, preparations should now be made to raise some. For that purpose a slight hotbed must be made about the beginning or the end of this month, for a one or two-light frame, or according to the quantity required, and make it about two or two and a half feet thick of dung. Then set in the frames and cover the bed about four, or five, or six inches deep with earth; get some roots of mint, and place them in drills, or lay them closely together upon the surface, and cover them with earth about an inch thick, in which plant the roots, and give each a moderate watering. Put on the glasses, and observe to raise them behind every day to admit air. The plantations will come up fit for use in a fortnight or three weeks, and afford a gathering of young green shoots for a considerable time.

Peas.—If peas were not sown in October, this is a proper season for it. The most forward kinds are the golden and single-blossomed, though there have been several new varieties lately introduced, which are well calculated for early crops. It will frequently happen that those sown in the present month will stand the severity of the winter, when the earlier sown crop has failed. A warm south border, under the protection of a wall or other fence, will be the most eligible situation for those which are early sown , and if this crop survive the winter, the product will be fit for gathering in May or June. Another crop should be sown towards the end of the month, in order to produce a continued succession.

Winter Salads.—The crops of cresses, endive, lettuce, parsley, and of radishes sown and planted as directed in the two last months, should, in the respect of severe weather, be covered with care.

FOURTH WEEK IN NOVEMBER.

General Directions. — Now take advantage of dry days and frosty weather, and bring in rotten dung from old hotbeds or dunghills, and lay it upon such vacant pieces of kitchen ground as want manure. The trenching or ridging up the ground in winter is a great improvement by turning down the top, and the fresh soil below turned up to the surface, which thereby mellows and improves by the weather more than many would imagine; and by its being laid up in rough ridges, the frost, sun and air can then have more free access, all of which contribute greatly to the enriching and the mellowing the ground, and the sooner this is done the better. Ridging strong loams or clayey soils is always proper before winter, because it meliorates the ground; but ridging light and dry soils is not only unnecessary, but altogether injurious; exposing such soils to the sun and air exhausts them more than any crop.

Asparagus—(To force.) In order to force asparagus, have a sufficient quantity of new dung thrown up to heat, which will make a hotbed, about three feet and a half high, and about five or six inches wider than the frame on each side, regularly beating it down; when the heat has come up, lay on about two inches depth of earth, level, and smooth; the roots, which should not be more than three, or at most four years old, from the seed, should be planted by raising a small ridge crossways, and placing therein the first line of roots close together, so that the bottoms may be two inches below the surface, and thus proceed with the rest. When they are all planted, let some earth be banked up around the sides and ends of the beds, an inch higher against the outside roots, and then cover the crown with some fine mould, about an inch or two high; in this state the bed is to remain without being covered with the glasses, unless during the heavy rains, but when the young buds of the asparagus begin to discover themselves, some more of the earth should be laid on, to the depth of four or five inches. The temperature of the heat of the bed should be examined by sticks thrust therein, and if found to be moderate, the frame and glasses may be put on. In order to secure the outsides of the roots, some bands of hay or straw should be fastened round the bed, so as to keep up the earth close to the edge of the frame, and when the heat is moderate, the glasses may be constantly covered at night with mats, &c., but in the middle of the day, when the weather is mild, the sun and air may be admitted. If the heat of the bed be discovered to be on the decline, it must be renewed by applying a lining of fresh hot dung to the sides and ends, as well as augmenting the covering of the glasses at night. The young asparagus should be gathered when two or three inches above the surface of the earth, by breaking them off from the plant, being careful not to injure those which remain.

Beans.—Beans, if the weather be open, may be still sown.

Cabbage and Colewort Plants.—The last planting of cabbages and coleworts should now be done, in rows a foot asunder and eight inches apart. They will be fit for use in April, May, or June.

Carrots.—Sow a few under a warm south wall, for although no great reliance can be placed upon this sowing, yet some may be saved for spring use, which will be very acceptable. If they fail, the loss will be but trifling. If any still remain in the ground, dig them up and store them away.

Cauliflowers.—Look over the cauliflower plants which are in frames, and pick off all decayed leaves, for they commit great injury to the plants. The glasses should be taken off every day that the weather is mild and dry, so that the plants may have the benefit of free air, but it must not be omitted to let the lights be put on every night.

Celery.—Continue to earth up the celery, and take care that the plants are tolerably dry before the earthing is performed.

Endive.—In a dry day, tie up endive to blanch; fern, or any other long litter, not too heavy, may be laid on the beds to keep the frost from the plants, and blanch them. If a dry cellar or shed can be conveniently obtained, some may be laid in it, or into melon and cucumber frames, which can be covered up in frosty weather; the glasses will keep the plants dry.

Mushrooms.—Now take good care of the mushroom beds, to defend them effectually from frost and wet, by continuing a good covering of clean dry straw constantly over the bed, not less than a foot in thicknes; and generally over the straw covering spread some large garden mats, which will throw the falling wet off more quickly and effectually, as well as prove a greater security against frost, or very cold weather. After heavy rains or snow, let the beds be examined, and if you find the covering next the bed wet, let the wet straw be directly removed, and some dry applied in its place.

Radishes.—If the weather be dry and open, some short-topped radishes may be sown, to come in early in the spring, and if they succeed they will come in for drawing the latter end of February or the beginning of March. Let the seed be sown in a dry south border of light earth, under a wall, and rake it in, or cover it with soil from the alleys, fully and regularly, and as soon as sown, cover the surface with straw, fern, or other dry, long litter, one or two inches thick, to remain constantly till the plants come up, which also cover every night, and in frosty weather, but uncover in mild days.

Small Salading.—Sow small salading, to continue the crop in succession, such as cress, mustard, radish, rape, &c. When the weather is mild, sow these seeds on a sloping, warm border, facing the sun, and cover them with glasses, to protect them from wet, which, however, should be raised occasionally to admit air. To raise small salading with more certainty, make a slight hotbed full of litter, on which place a frame of six or seven inches depth, fill this with light fresh earth, sow the seeds thereon, either in drills or all over the bed; cover them very thinly with mould, and place the glasses over the whole.

THE PEONY.

GENERAL CHARACTER. — Calyx, five leaved. Petals, five. Styles, none. Capsules, many seeded. The seeds oval, smooth, beautiful, and coloured; the number of the germina, though naturally two, varies greatly; in some species there are five.

The peony is a native of Switzerland, where it was esteemed very highly on account of its supposed medical virtues, and for which purpose it is extensively cultivated in various parts of that country; from Switzerland it was introduced into other parts of Europe as an ornament to the flower garden, and from Europe into the United States, where it is now naturalized, and is found growing wild on deserted fields and waste lands, producing its flowers in May and June.

Culture gives this plant double flowers, and alters their colour into all the degrees between a deep blood colour and white; the leaves of the plant also become broader or narrower by the same means. This plant is very hardy, it will grow almost on any soil or situation, and is propagated by parting the roots, which multiply very fast. They should be planted in August, or the beginning of September, and will then flower the succeeding summer. The offsets should not be too small, and should all have a fair bud or eye. The single kinds may also be propagated by sowing their seeds in a light earth in August and managing them in the method of all other seedling plants.

The culture of the herbaceous sorts is so simple as to need few details. In the autumn the branches should be cut down, and a little decayed manure put over the plant to protect it from the severity of the winter and to enrich the soil; this should be added also in spring, just as the flower stems are being thrown up, as it greatly invigorates the plant. Shortly afterwards each branch should be separately secured to a neat stake; as the plant grows rapidly, these are soon budded by the foliage, and are of the greatest advantage in keeping the plants in a proper position. In order to give it the necessary air and light as well as to secure the flowers, the terminal bud only upon each branch should be left to flower. The whole of the species and varieties are increased by division of the roots, or if the sorts be valuable by grafting on the commoner sorts. The seed may be sown as soon as it is ripe, and will be several years before it flowers; the young plants will require an annual application of manure.

There are about twelve varieties; the single crimson peony is illustrated in another page.

This plant takes its name from the physician, Pœon, who, according to mythology, first used the plant in medicine, and cured Pluto with it. It has long been considered as a powerful medicine, and until the late revision of the pharmacopœia, by the London College, it had a place in the catalogue of the *Materia Medica*, into which the two common varieties of this plant are indiscriminately directed for use, and improperly distinguished into male and female peony. The roots, flowers, and seeds, have been esteemed in the character of anodyne, and corroborant, especially the roots, which have been extensively used in the treatment of epilepsy; for this purpose, the method adopted by the ancients was to cut the roots into thin slices, which were attached to a string, and suspended about the neck as an amulet; if this failed of success, the patient was to have recourse to the internal use of the root, which was given in the form of powder, and in the quantity of a drachm two or three times a day, by which we are informed both infants and adults were cured of this disease. The roots and seeds of peony have, when fresh, a faint, unpleasant smell, somewhat of the narcotic kind, and a mucilaginous, sub acrid taste, with a slight degree of bitterness and astringency. In drying, they lose their smell, and partly their taste. Extracts made from them in water are almost insipid, as well as inodorous, but extracts made by rectified spirits are better, and considerably astringent.

METHOD OF TRANSPLANTING.— Small plants may be very neatly and safely transplanted from the borders by making narrow trenches round them, and filling such trenches with plaster of Paris, mixed with water to the consistence of a thick cream. This quickly becomes hard, and forms a pot, by which the plant may be taken up without disturbing its roots.

CULTIVATION OF ANNUALS.

ANNUALS, as I have observed before, are flowers that rise, bloom, and die in the same year; and must, therefore, be raised from seed every spring.

The first class of annuals, being very delicate, and requiring great care, with the constant assistance of glass frames, I shall not even name, since they do not enter into the nature of my work.

I proceed to the second class, which are hardier than the above, though they should be raised in a warm border, and be covered with a hand-glass, if you wish them to flower in good time.

The China aster, Chrysanthemum, white and purple Sultan, African and French marigolds, Persicarius, &c., will grow well in a warm border of natural earth, if sown in April but they also flower a month earlier if they are assisted by a hotbed or glass. These annuals must be all planted out, when tolerably strong, in the borders, taking care to allow each plant plenty of space, that they may not crowd each other. The China aster branches into many stems and flowers, therefore they may be planted singly, or not less than six inches apart. The July flowers, or more commonly called gilliflowers, become expansive as they increase. They should not be crowded together; three in a group are quite sufficient, and they should be six inches apart. The same may be said of the stock varieties.

I have ever found the hardy annuals to grow finest by allowing them to become self-sown. They flower some weeks earlier, and invariably produce larger and brighter flowers.

When gathering my flower seeds in August and September, I allow one-half to remain sprinkled over the borders, and the young shoots never fail appearing healthy and strong above ground in March and April, the months appropriated to sowing the seed. Thus, my Lavateras, Larkspurs, &c., are in beautiful blow, while the second crop, or seeds sown in spring, are but showing their green heads above the surface. I weed away the superfluous self-sown plants to my taste; but the birds take care that no one shall be encumbered with superfluity. I have by this means a first and second crop of the same annuals, but the crop of self-sown are far superior. They are up before the heats come on, to dry the earth, and dwindle the flower.

Dig the ground well with your trowel, and rake it very fine, before you put in the seeds in spring. Annuals love a light, friable soil. All the hardy kinds may be sown in March, each sort in little separate patches as follows:—

Draw a little earth off the top to one side, then sprinkle in the seed, not too plentifully, and cover it again with the drawn-off earth. Half an inch is sufficient depth for small seed. The larger kinds, such as sweet peas, lupins, &c., must be sown an inch in depth. When the plants have been up some time thin them well. The more space you have, the finer the plants will rise.

The hardy annuals will not bear transplanting: they must be left to flourish where they are sown. The larger kinds, such as the lavatera or mallow, should only be sown in groups of three together. The lupin tribe should not exceed five plants in a group. The convolvulus, also, requires four or five plants only in a group. Water the patches in dry weather moderately, and be careful never to use pump water. If you have no soft water, a tub should be placed in the garden to receive rain water; and if, as in towns, pump water must be chiefly used, let it remain a day or two in the tub, to soften in the air and sunshine.

The first week in April is the safest period for sowing annuals, as the cutting winds have ceased by that time, and frost is not so much to be apprehended. The soft rains, also, fall in warm showers, to give life and germ to the seeds and plants, and they appear in a shorter space of time.

Those amateurs who live in the vicinity of nursery gardens have a great advantage over the more remote flower fanciers. They can be supplied at a trifling expense with all the tender annuals from hotbeds, either in pots, or drawn ready for immediate transplanting.

If you do not raise your own seed, be careful how you purchase your stock, and of whom you receive it. Many seedsmen sell the refuse of many years' stock to their youthful customers, and produce great disappointment. There is one way of ascertaining the goodness of seed, which will not deceive. Previous to sowing, plunge your lupin, sunflower, &c., seeds into a tumbler of water: the good seed will sink, while the light and useless part remains floating on the surface.

If you grow your own seed, exchange it every two years with your neighbours. Seeds love change of soil; they degenerate if repeatedly grown and sown upon the same spot, particularly sweet peas.

Sweet peas should be put into the ground early in March, for they will bear the wind and weather. Make a circle round a pole, or some object to which they may cling as they rise; and put the peas an inch deep, having soaked them in water well saturated with arsenic, to guard them from the depredation of birds and mice. Add an outer circle of peas every month, so that a continual bloom may appear. The circle first sown will ripen and pod for seed in the centre, while the outer vines will continue flowering till late in the autumn. When you have gathered a sufficient number of ripe pods, cut away all the pods which may afterwards form with your knife. This strengthens the vines, and throws all their vigour into repeated blooms.

Be very careful to throw away the arsenic water upon your heap of compost, and do not put that powerful poison into anything that may be used afterwards in the house. Soak the peas in a flower-pot saucer which is never required for any other purpose, and keep it on a shelf in the tool-house, covered up. Three or four hours' soaking will be sufficient.

I have got sweet-peas into very early blow by bringing them up in pots in-doors, and transplanting them carefully in April, without disturbing the roots. In doing this, push your finger gently through the orifice at the bottom of the flower-pot, and raise its contents "bodily." Then place the ball of earth and plants into a hole trowelled out to receive it; cover it round gently, and, if the weather is dry, water it moderately.

Ten weeks' stock is a very pretty annual, and continues a long time in bloom. Mignionette is the sweetest of all perfumes, and should be sown in September for early blowing, and again in March for a later one. It is always more perfumy and healthy, if dug into the ground in autumn to sow itself. Venus' looking-glass is a very pretty, delicate flower. Indeed, every annual is lovely; and the different varieties give a gay and rich appearance to the flower-garden during the three summer months.

The Clarkias are very pretty annuals, with a hundred other varieties lately introduced, and which are specified in Mrs. Loudon's new work upon annuals. My plan is, to give a general idea of their treatment only, under the classification of hardy annuals, or those annuals which may be nurtured without a hotbed.

Keep your annuals from looking wild and disorderly in a garden by allotting the smaller kinds their separate patches of ground; and trim the larger annuals from branching among other flowers. For instance, cut away the lowest branches of the China aster, the African marigold, &c., and train the plant erect and neatly to a slight rod or stick; cut away the flowers as they droop, reserving one or two of the finest blooms only for seed; and let each plant look clean and neat in its own order. By cutting away flowers as they droop, the plant retains vigour enough to continue throwing out fresh flowers for a long period.—*Every Lady her own Gardener.*

THE EXPENSE OF ERECTING A TWO-LIGHT FRAME.

(Intended for the Accommodation of Persons with small Gardens.)

It will first be necessary to consider the expenses of having a two-light frame made. This would of course depend, in a great measure, on the nature of the materials, and the size it was intended to be. The criterion we shall take is, that the frame and lights be made of the best red deal; glazed with good glass, and be well painted; the size a common one, namely, each light measuring six feet by three: the cost of the wood, together with the labour of a carpenter properly making, would amount to two pounds two shillings. The two lights glazing with good glass, cut to the size of six inches by three, would cost eighteen shillings; and giving three coats of white paint, eleven shillings and threepence; which makes the whole cost of the frame to amount to three pounds eleven shillings and threepence. Having thus made a rough calculation of the expense attending the erection, the next thing necessary is to point out the various uses it may be put to throughout the year. The material for heating will of course be dung, the expense attending which depends on the situation, means of carriage, and other circumstances, which entirely preclude the possibility of any certain estimate, but in most places dung could be procured in a green state at a very trifling expense. For the various uses to which such a frame could be put throughout the year we must speak of each month separately, and shall, therefore, commence first with—

January.—Those who have a taste for flowers will now have their frame filled with greenhouse plants, camellias, or auriculas, which cannot be disposed of otherwise before next month.

February.—The camellias or other greenhouse plants may now be taken out of the frames and placed in such rooms as are convenient to flower them. Let the auriculas, &c., be placed in a temporary shelter, made with a few boards, so that they can be allowed plenty of air, or be fully exposed in fine days, and well covered down at night with mats or litter to preserve them from frost. Then let a bed be made for the frame of prepared horse-dung, about three feet thick in front, and four feet at the back, which will leave a good slope towards the south; set on the frame, and after the bed has settled a day or two, let one of the lights have about a foot thick of light sandy soil put in it; if this cannot be easily procured, mix a large portion of sand with common garden mould; in this plant some whole potatoes of the early kidney sort, which are always best for the first crops, at about the distance of eight inches in the rows, and one foot from row to row, making the rows from the back to the front of the bed, which will admit the sun to the roots when the tops become large; on the top of these potatoes, scatter a crop of scarlet radishes, which will be all drawn before the potato tops attain any size. Let the other light have some sandy soil or old tan put into it, then plunge a quantity of three years' old rhubarb roots as closely as they can be placed to each other, and turn a large pot over each root, to exclude it from the air; if it be the early scarlet variety, the stalks will be ready for use in eight days; three or four large pans or feeders may also be filled with light soil, and sown with light salading: as soon as the seeds begin to show themselves above the soil, sow three or four others to succeed them. When the radishes appear, give as much air as possible without injuring them by either cutting winds or heavy rains. Also prepare a quantity of dung for a cucumber bed, let it be well shaken and thrown in a heap, and watered, if necessary, turning it two or three times until it becomes sweetened. Towards the end of the month, when the rhubarb is gathered, fill the light with the same sort of soil as the other, and plant another crop of kidney potatoes, with a few radishes sown over them as recommended for the last, leaving, however, a space at the front of the frame sufficiently broad to set a row of pans or feeders; sow in one or two of them seeds of the red celery, and in another, a few seeds of Bath, cos, and other hardy lettuces; the remainder of the pan will do for small salading.

March.—As soon as the violent rankness of the dung is properly worked off, begin to make up a cucumber bed of not less thickness than four feet in the front, and five feet at the back; as soon as the radishes are up, take off the frame and place it on the new bed; hoop the radish bed over with mats, to preserve the potatoes and radishes in case of frost; if it is convenient to place a hand-glass over the celery and lettuce pans it will be all the better; fork over the new-made bed occasionally, and when the steam is found to be pretty sweet, put about a bushel of good light maiden soil, mixed with a small portion of pigeons' dung or that of fowls in the middle of each light, and in the course of two or three days, obtain from some neighbouring garden, two pots of good stopped cucumber plants; if each pot contains three plants, let one be pulled out, as two are quite sufficient for each hill. Make a hole on the summit of the hill, and turn out the plants, with the ball entire, place them in the hole, and press the soil about the roots slightly, also give them a sprinkling of water, made new milk warm; and if the sun shines bright, take a handful of litter and lay it on the glass over the plants, which will sufficiently shelter them until they have become established; earth and treat them in the usual manner, and fruit will be ready to cut by the middle of May.

About the end of June or beginning of July, if the season be fine, cucumbers will have become so common that perhaps the proprietor may not consider it worth while to keep the frame over them, especially as they will grow and bear without it; if this is the case, a pit should be formed and planted with either grapes, figs, or peaches, set on the frame, and a crop of excellent fruit may be obtained much earlier than in the open air, and of very superior flavour. Nothing more could be accomplished properly with one frame for that season, as if either grapes or figs were planted in the pit, the frame would be kept in use till October; when the season for sheltering greenhouse plants, &c., for the winter commences, and continues until the following February.

October.—To prepare the frame for the reception of the greenhouse plants, &c., take it from off the pit, and place it in a warm situation opposite the south, and fully exposed to the sun; raise it from the ground by laying a brick under the end of each of the front corners, and two bricks under each of the back ones, this will give a good bevel towards the sun; then proceed to place all round the outsides of the frame not less than a foot thick of soil, well trodden down, and raised nearly as high as the top of the frame all round; next, prepare the floor on which the plants are to be placed, first, by laying a good floor of lime scraps; and on the top of that about six inches thick of coal ashes, on which arrange the plants. This floor will effectually prevent worms from penetrating, and also add much to the warmth and cleanliness of the plants. Elevating the frame also is far preferable to setting it upon the ground, as the frame is not so liable to rot, and the more the plants are raised above the level of the surrounding earth, by a thick floor of ashes, &c., the more easily will they be kept from damp.—*J. Paxton.*

THE IMPERIAL MARTAGON.

This is a very elegant and noble flower, known from the earliest time, and has always been a favourite with those who cultivate flowers. Its great beauty will continue to recommend it, and its easy culture forms no little part of that recommendation.

It is in general called by botanists Martagon latifolium. Some, after Lobel, call it Hemerocallis, others more correctly, Lilium martagon, and Lilium floribus reflexis, that is, the martagon lily, or the lily with reflex flowers. Linnæus joins it to the lily, with whose characters it perfectly agrees, and adds as the distinction of the species, foliis, or verticellatis floribus reflexis, corallis resolutis, that is, "Verticellate leaved lily, with the flower turned down, and their petals bending up again."

The flowers are very beautiful, crowning the stalk in great numbers, and rising one above another, in a kind of pyramidal form. They are large, and of a pale red, spotted with a deeper blood red, or purple, in a various and irregular manner, but very pleasing.

The seeds are very numerous, lying in a double row in each cell, flattened and rounded on the outer part.

The martagon is a native of the northern parts of Europe, where it thrives best in a deep light earth about the edges of forests, and Ehbert says, in his usual quaint style,—"No particular care can be needful for preserving a plant which nature leaves to take its chance in Hungary and Switzerland."

In regard to the compost proper for its cultivation: take a bushel of pond mud, two bushels of rich pasture mould, half a bushel of vegetable mould, and a peck of sand. These should be mixed in the spring, and two or three times turned between that season and July, when it will be proper to plant the offsets from the roots.

The offsets are to be taken off when the stalks are decayed, and they must be planted immediately. Let a part of the garden be chosen where there are the morning sun and some shade, and let the compost be put in the place of the common mould. Let the offsets be planted at two feet distance, and afterwards kept clear of weeds, and occasionally watered.

This is the common mode of culture, but there is a great advantage in raising the plant from seed. The flowers will be larger and more elegantly spotted, when everything is managed with proper precaution. The following is the best method to be adopted in sowing the seed of this flower:—

Save the seeds from a strong and healthy plant, and sow them on a bed of the same compost, in a part of the garden open to the morning sun for two hours, but sheltered from its rays during the rest of the day.

The best time for sowing them is the middle of August; they must be scattered thickly upon the mould, and covered a finger's breadth with the same compost sifted over them. From this time the bed is to be kept clear from weeds, and sometimes slightly watered.

In the succeeding spring they will shoot, and the young plants, when they have a little growth, must be thinned where they have risen too closely. When the leaves of the young plants are decayed, let them be covered with half an inch of fresh mould.

Thus let them be managed till the following August, then let the mould be sifted, and the roots carefully taken out and planted in the garden in a new bed of the same compost, a little more exposed to the sun, but still shaded from the full blaze of noon.

They should be planted in this bed at a foot distant, and there managed as before directed, weeding and watering till they flower.

There will be found a great number of varieties, and the best should be marked whilst in flower. These must be preserved afterwards, and the rest planted out in common borders. The varieties consist in three particulars.

1st, in the ground colour of the flower, which will be fleshy, crimson, or pale purple.

2nd, in the tint of the spots, which will be of a deep orange, blood colour, or violet purple, or almost black.

3rd, in their distribution and form; some will be round, others oblong.

When the finest flowers have been separated from the rest, their roots must be taken up as soon as the stalk is decayed, and planted immediately in fresh compost of the same kind, at two feet distant.

This must be done every year; the offsets must every time be carefully taken off, and the old compost cleared away.

TWO METHODS OF OBTAINING IMPRESSIONS OF PLANTS AND FLOWERS.

THE advantage of being able to take accurate impressions of plants without much labour, need not be pointed out to those who can appreciate what is useful. It is not brought forward as a substitution for dried specimens, where these can be attained and attended to; but as being less cumbersome it deserves notice, as a means of refreshing the memory, in very many instances, in a manner equally satisfactory as when specimens are employed. It has, further than this, no claim to novelty, but simply to usefulness.

The materials required are few, and these not expensive. One pennyworth of lampblack and one pennyworth of sweet oil are all that will be required besides the paper. A large sheet of paper should be provided, and this should be prepared by rubbing it evenly all over with a piece of flannel moistened with the oil. This must be done thoroughly, and when the paper is well moistened, but not in a wet state, with the oil, a small quantity of lampblack should be laid evenly over it, also using flannel for this part of the opertion. If this preparation can be made a day before using the paper, it will be so much the better. The next process requires great care:—having the prepared sheet in readiness, place on it evenly and flatly the plant, flower, or leaf, of which an impression is required; then place over this a dry sheet of paper, and with a handkerchief or cloth press firmly over every part, that it may equally and regularly receive the black preparation. The paper intended to receive the impression should now be in readiness, and the specimen must be carefully removed and placed on it, and great care must be taken that its position is not changed; this, too, must be again evenly and firmly pressed as before, and the impression will be complete, and must be laid carefully aside to become dry. A specimen or two can be tried on a spare sheet, in order to ascertain whether the blackened sheet is in a proper state of preparation, before it is attempted to take a very careful impression. This is particularly valuable in preserving sketches of the leaves of rare and valuable plants.

The following instructions for obtaining drawings by the photogenic process of M. Daguerre, we copy from the *Magazine of Natural History.* They are so simple that no one will be at a loss to carry on the process for him or herself:—

The mode of fixing the images of the camera obscura, and copying engravings, by means of the chemical action of light on paper prepared with a solution of chloride of silver, has attracted so much notice, and produced so much popular excitement, that a few observations on this interesting process will not be perhaps considered out of place in your magazine. I venture to occupy your pages with the less reluctance, because I feel that the application of this heliographic or photogenic art will be of immense service to the botanist, by enabling him to procure beautiful outline drawings of many plants, with a degree of accuracy which, otherwise, he could not hope to obtain.

That light will act on chloride of silver is by no means a novel discovery, and paper prepared with it was long ago used by Ritter and Wollaston, in testing the chemical action of the rays of the solar spectrum; still, in this country it was not, I believe, applied to any purpose likely to be of use to the naturalist and traveller, until brought into notice by the researches of Mr. Talbot. M. Daguerre has published a mode of preparing a sensitive paper, far exceeding that of Mr. Talbot in delicacy, but otherwise possessing the same property of indicating intensity of light by depth of colour.

M. Daguerre prepares his heliographic paper by immersing a sheet of thin paper in hydrochloric ether, which has been kept sufficiently long to be acid; the paper is then carefully and completely dried, as this is stated to be essential to its proper preparation. The paper is next dipped into a solution of nitrate of silver (the degree of concentration of which is not mentioned,) and dried without artificial heat in a room from which every ray of light, is carefully excluded. By this process, it acquires a very remarkable facility in being blackened on a very slight exposure to light even when the latter is by no means intense; indeed, by the diffused daylight of early evening in the month of February. This prepared paper rapidly loses its extreme sensitiveness to light, and finally becomes not more readily acted upon by the solar beams than paper dipped in the nitrate of silver only. Mr. Daguerre renders his drawings permanent by dipping them in water, so as to dissolve all the undecomposed salt of silver.

This process is very inconvenient for many reasons, among which are the difficulty of procuring, as well as the expense of hydrochloric ether; on this account I prefer

Mr. Talbot's process, although it is to be regretted this gentleman has not stated more explicitly the proportions in which he uses the ingredients employed in the preparation of his sensitive paper. I have performed a set of experiments on this subject, and can recommend the following proportions as the most effective and economical. Two hundred grains of common salt are to be dissolved in a pint of water, and sheets of thin blue wove post paper saturated with the solution, which for this purpose should be poured into a dish, and the paper being immersed, the application of the solution to every part should be insured by the use of a sponge. The paper is then to be removed, drained of its superfluous moisture, and nearly dried by being pressed between folds of linen or bibulous paper.

Two hundred and forty grains of fused nitrate of silver are then to be dissolved in twelve fluid ounces of water, and this solution is to be applied by means of a sponge to one side of each sheet of the previously prepared paper, which side should be marked with a pencil, so that when the paper is fit for use the prepared side may be distinguished. The sheets of paper are then to be hung upon lines in a dark room to dry, and when nearly free from moisture, their marked sides are to be once more sponged over with the solution of silver, and finally dried; they are then to be cut into pieces of convenient size, and preserved from light, or even too much exposure to air, by being wrapped up in several folds of brown paper, and kept in a portfolio.

The proportions above recommended are sufficient for the preparation of a quire of the kind of paper alluded to; if more of the salt of silver were used, the paper would, indeed, become darker by the action of light, but its expense would be proportionately increased; and when prepared in the manner directed, it assumes by less than a minute's exposure to the rays of the sun, a rich mulberry brown tint, of sufficient intensity to define an outline very beautifully, which indeed is all that is required.

To use this paper, the specimen, of which a drawing is required, is removed from the herbarium, placed on a piece of the paper, and kept *in situ* by a pane of common glass pressed by weights; a piece of plate glass, however, is preferable, as it is sufficiently heavy to press the plant close to the paper. The whole is then placed in the sunshine, and in less than a minute all the uncovered parts of the paper will assume a rich brown tint. The paper should then be removed from the direct influence of the sun, and placed in a book until the drawing be ma permanent: the specimen, quite uninjure by the process, may then be replaced in th herbarium, and the drawing of anothe taken, and so on, So rapidly is this proces executed, that twenty-five to thirty drawing may be obtained in an hour, providing w are favoured with a direct sunbeam; i however, we have only the diffused da light, five or ten minutes, and sometime even more, are required to produce a drawing with well defined outlines.

If drawings of recent plants be required specimens of proper size should be cut, an if not too rigid, placed on a piece of paper and kept in a proper position by means of pane of glass, as in the case of dried specimens; but if the plant be rigid, the specimens should be placed for twenty-four hour between folds of blotting-paper, under heavy weight, before placing them on th sensitive paper. Having obtained as man drawings as are required, the next thing is t fix them, so that their otherwise evanescen character may not deprive them of thei value. For this purpose place them in dish, and pour cold water over them allow them to soak for ten minutes, and the transfer them to, or sponge them over with a solution, made by dissolving an ounce o common salt in half a pint of water, t which half a fluid ounce of the tincture o sesqui-chloride of iron has been added. Th drawings thus prepared may be dried b pressure between folds of linen, and exposure to the air; and may then be examine without danger. On looking at them, ever one must be struck with the extrem accuracy with which every scale, nay, every projecting hair, is preserved on the paper; the character and habit of the plant is most beautifully delineated, and if the leaves be not too opaque, the venation is exquisitely represented; this is particularly the cas with more delicate ferns, as *Polypodium Dryopteris*. Among those classes of plants which appear to be more fitted than others for representation by this process, may be ranked the ferns, grasses, and umbelliferous plants; the photogenic drawings of the former are indeed of exquisite beauty.

The fact of the object being white on a brown ground does not affect the utility of this mode of making botanic drawings; indeed, I almost fancy that their character is better preserved by this contrast to tint, than by a coloured outline on a white ground. Every one will be fully aware of the value of this process to the botanist, in obtaining drawings of rare plants preserved in the herbaria of others, and which he would erwise have probably no means of taining.

If the drawing of a tree or a large shrub required, a box blackened inside, having hole at one end about one and a quarter ch in diameter, must be provided; in this le should be placed a lens of five or six ches focus; if one of longer focus be used, e dispersion of light becomes too great to sure an accurate representation. When e tree or shrub is well illuminated by the lar beams, the lens should be presented wards it, at a distance varying, of course, ith the height of the object. A piece of rdboard should then be placed in the box, little beyond the true focus of the lens and e former, until a well-defined bright image the tree, etc., is formed on the card, of urse, in an inverted direction. The box then to be placed on any convenient sup-ort in this position, and a piece of the epared paper fixed on the card; the lid of e box is then to be closed, and the whole ft for half an hour, at the end of which me a beautifully accurate outline of the bject will be found on the paper, which is en to be rendered permanent in the usual anner. It is obvious that this plan is navailable on a windy day, on account of e branches of the tree, &c., being continu-lly moving, so that it is of far less use to e botanist than the above described process r obtaining drawings of small specimens.

ON LILACEOUS FLOWERS.

I THINK the idea is excellent of amusing e reader, and exercising his attention upon ch agreeable objects as plants. Perhaps I ould not have ventured so far as to propose myself, had I not been convinced that, at l times of life, the study of nature abates e taste for frivolous amusements, assuages e tumult of the passions, and provides the ind with an object worthy of its contempla-on. Besides, to be merely acquainted ith plants by sight, and only to know their mes, may be too trifling an attainment for any of our readers. It may be presumed, at they would not be satisfied with so nall a share of knowledge, and I propose ey should possess higher notions of the egetable structure or organisation of plants. would have them gain some real informa-on, though they should only take a few eps in the investigation of the richest and ost beautiful of the three kingdoms of ture.

A perfect plant is composed of a root and a stem, with its branches of leaves, flowers, and fruit. This, at least, is sufficiently known already to understand the terms; but one principal part requires examining now at large, I mean the fructification, that is, the flower and fruit. Let me begin with the flower, which first appears. In this part nature has inclosed the summary of her work, by this she perpetuates it, and this is commonly the most brilliant part of the vegetable, aways less liable to variations.

Take a lily, as an example of the lilaceous tribe, and dissect it. Before it opens, you see at the top of the stem an oblong greenish bud, which grows whiter the nearer it approaches the period of opening, and when it is quite opened, you perceive that the white cover assumes the form of a basin or vase, divided into several segments. This is called the corolla, and when it withers, it falls or separates into six distinct pieces, which are called petals, and, consequently, it is a pentapetalous, or a polypetalous corolla. Exactly in the middle of the corolla, a sort of little column rises from the bottom, pointing directly upwards. This, taken as a whole, is called the pistillum, consisting of the parts called the germ, style, and stigma. Between the pistil and the corolla, six other bodies rise, entirely separate from each other, which are the stamens, each consisting of two parts, viz., the filament and anthers. Each anther is a vessel which opens when ripe, and throws out a yellow dust, having a strong smell, called pollen or farina.

Such is the general analysis of the parts which constitute a flower. As the corolla fades and falls, the germ increases and becomes an oblong triangular capsule, within which are flat seeds in three cells. This capsule, considered as the cover of the seeds, takes the name of pericarp.

The parts here mentioned are found in the flowers of most other plants, but in different proportions, situations and numbers. By the analogy of these parts, and their different combinations, the families of the vegetable kingdom are determined. The analogies are connected with others in those parts of the plant which seem to have no relation to them. For instance, the number of six stamens, sometimes only three, of eight petals, or the divisions of the corolla, and that triangular form of the germ, with its three cells, determine the lilaceous tribe; and in all this tribe, which is very numerous, the roots are bulbs of some sort or other. That of the lily is squamose or composed of scales; in the asphodel there is a number of oblong solid bulbs connected together; in the crocus and saffron there are two bulbs, one over the other; in the colchicum they are placed side by side. The calyx, which accompanies most other flowers, is wanting in the greater part of the lilaceous tribe, as the tulip, hyacinth, narcissus, and even in the onion, leek, garlic, &c., which are also lilaceous, though at first sight they appear very different. It will also be perceived, that in the whole tribe the stems are simple and unbranched, the leaves entire, being never cut or divided, observations which will confirm the analogy of the flower and fruit in this family by that of the other parts of the plant. If some attention be bestowed upon these particulars, and they become familiar by frequent observations, our juvenile readers will soon be able to determine, on an attentive and continued inspection of a plant, whether it be of a lilaceous tribe or not, without even knowing the name of the said plant. They will see, that this is not a mere labour of the memory, but the study of observations and facts truly worthy of a naturalist.—*Ashford.*

THE PELARGONIUM.

THIS genus furnishes a number of admirable flower-garden plants, which are popularly known as scarlet geraniums, horse-shoe geraniums, ivy-leaved geraniums, and variegated geraniums. Of the first class we have not seen a better variety for a low bed than General Tom Thumb. Its foliage is a shining light green; its flowers bright scarlet, and numerous; and its habit dwarf and spreading. It is, however, rather tender in constitution, and, therefore, requires a little more warmth in winter than most others. The Bath scarlet and the Frogmore scarlet are two older sorts, which bloom freely, and are fine in colour; and the same may be said of Mrs. Mayler, Punch, and the huntsman, with many other varieties of more modern origin. The horse-shoes are distinguished by a dark mark on the leaves, of the form of a horse's shoe. Some of these, as pre-eminent, and cottage maid, have the bright scarlet flowers of the preceding kinds, but those usually called by this term are descendants from pelargonium zonale, an African species, and are known by gardeners as the red horse-shoe, which has crimson red flowers; the purple horse-shoe, which has red flowers, suffused with purple; and compactum, which has close heads of red blossoms. The true ivy-leaved geraniums are considered distinct species by botanists. One kind (Pelargonium lateripes) has reddish flowers; another (P. scutatum) has nearly white blossoms. The latter is sometimes employed for bedding, when its long flexile shoots should be pegged down; but both species are chiefly used for hanging over the sides of elevated boxes, baskets, or vases. Many varieties of variegated leaved geraniums are cultivated; the best of these for our purpose are the red-blossomed, which has leaves margined with white, and deep coloured small flowers; and Mangoles', which has leaves edged with clearer white, and flowers of a delicate pink colour. Another variety, known as the cup-leaved, has pretty pink flowers: but the plant is more delicate than the two preceding sorts. A new kind has been raised (and was some time ago in the possession of Messrs. Lee, nurserymen, Hammersmith), which has bright scarlet flowers, and promises to be a great acquisition to the tribe, if it should not prove too tender for bedding. A very distinct and desirable pelargonium has become extensively known within the last few years under the name of Lucia rosea. Its leaves resemble those of the scarlets, and so also do its flowers in form and style, but the colour is a delicate pink. To form large bushes for dotting about the lawn, or for single plants to fill large vases, several scarlets of very robust growth are cultivated, of which those called Smith's emperor, and Smith's superb, will be found as good as any. All these can be readily propagated by cuttings during the growing season; and they generally produce seeds freely, from which new varieties might be raised. We prefer cuttings, to pot singly in small pots and sandy soils, keeping them close and warm till rooted, and cautiously avoiding over watering; for as the shoots are rather succulent, an over supply of moisture is certain to rot them. In autumn, when the beauty of the flower-garden is over, the old plants should be taken up with good roots, and potted, cutting their heads well in; they ought then to be put under glass, and encouraged to push young roots; and, if properly managed during winter, they will form healthy plants for turning out into the beds again in the following spring. A stock of young plants ought, however, to be maintained, to supply deficiencies, as some of the old ones will unavoidably die. Some of the hardier varieties may be wintered in a cellar, by merely covering their roots with soil; and when the weather is sufficiently settled in spring, they can be transferred direct to the flower-garden, without the trouble of potting them. A new class, designated fancy pelargoniums, has lately become popular. The best for bedding are said to be Diadematum, Diadematum rubescens. Rouge et Noir, and Queen Victoria. These, with such other varieties as are found to succeed planted out, would form a novel and interesting bed in a warm situation.—*Whiting's Flower Gardening.*

PLEASURES OF GARDENING.

As gardening has been the inclination of kings, and the choice of philosophers, so it has been the favourite of public and private men: a pleasure of the greatest, and the care of the meanest, and, indeed, an employment and profession for which no man is too high or too low. The interest which flowers have excited in the breast of man, from the earliest ages to the present day, has never been confined to any particular class of society or quarter of the globe. Nature seems to have distributed them over the whole world, to serve as a medicine to the mind, to give cheerfulness to the earth, and to furnish agreeable sensations to its inhabitants. The savage of the forest, in the joy of his heart, binds his brow with the native flowers of the woods, whilst a taste for their cultivation increases in every country in proportion as the blessings of civilization extend. Love for a garden has powerful influence in attracting men to their homes; and, on this account, every encouragement given to increase a taste for ornamental gardening is additional security for domestic comfort and happiness. It is likewise a recreation which conducts materially to health, promotes civilization, and softens the manners and tempers of men. Flowers are, of all embellishments, the most beautiful, and of all created beings, man alone seems capable of deriving enjoyment from them. The love for them commences with infancy, it remains the delight of youth, increases with our years, and becomes the great ornament of our declining days. The infant no sooner walks than its first employment is to plant a flower in the earth, removing it ten times in an hour to wherever the sun seems to shine most favourably. The schoolboy, in the care of his little plot of ground, is relieved of his studies, and loses the anxious thought of the home he has left. In manhood our attention is generally demanded by more active duties, or by more imperious, and perhaps less innocent occupations; but as age obliges us to retire from public life, the love of flowers and the delight of a garden return to soothe the latter period of our life.

In their growth, from the first tender shoots which rise from the earth, through all the changes which they undergo to the period of their utmost perfection, he beholds the wonderful works of creative power; he views the bud as it swells, and looks into the expanded blossom, delights in its rich tints and fragrant smell, but, above all, he feels a charm in contemplating movements and regulations before which all the combined ingenuity of man dwindles into nothingness.

If herbaceous plants require little pruning, yet, nevertheless, something in this way may be occasionally required, on the same general principles as we see judiciously applied to forest trees.

Superstitions with regard to the Blossoming of Plants.—The crocus was dedicated to St. Valentine, as it appears about the period of that saint's day, which is regarded as peculiarly sacred to affection. St. Valentine is recorded to have been eminent for love and charity. One species of daisy appears about the time of St. Margaret's day; this is called in France "La Belle Marguerite," and in England herb Margaret.

The crown imperial blossoms in England about the 18th of March, the day of St. Edward, King of the West Saxons; nature thus, as was imagined, honouring the day with a royal flower.

The cardamine, or our Lady's flower, distinguished for its pure white, is dedicated to the Virgin Mary.

The St. John's wort blossoms near that saint's day. The scarlet lychnis, called the great candlestick or candle (*candelabrum ingcros*), was supposed to be lighted up for St. John the Baptist, who was a burning and a shining light. The white lily expands about the time of the *annunciation*, affording another coincidence of the blossoming of white flowers at the festivals consecrated to the mother of Christ. The roses of summer are said to fade about the period of St. Mary Magdalen's day.

The passion flower is said to blossom about Holy Rood day. Allusions to this day being frequently found among writers of former days, it is said that, according to the legends of the Romish Church, the cross on which our Saviour was crucified was discovered in the year 326, by Helena, the mother of Constantine, who built a church on the spot where it lay. The word *rood* signifies the cross, thus this day is the day of the Holy Cross.

Of the various agents by which vegetables are nourished, water is thought the most important. Some plants grow and mature with their roots immersed in water, without any soil; most of the marine plants are of this description.

Atmospheric air is necessary to the health and vigour of plants; if a plant be placed under a glass into which no air can enter, it withers and dies.

Most plants are found by analysis to contain a certain portion of salts, such as nitre, and muriate of soda (chloride of sodium), or common salt. It appears that the root absorbs therefrom the soil by which it is nourished.

No plants can grow without some degree of heat, though some require a greater portion of it than others.

Plants may be made to grow without light, but they will not exhibit the verdure, or any of the properties of health. The atmosphere which is contaminated by the respiration of animals is restored to purity by the vegetation of plants; but secluded from light, vegetables are no longer capable of converting a portion of the fixed air to their use, or of supplying the atmosphere with the oxygen on which its importance in supporting animal life chiefly depends. By the action of light, the carbon of the fixed air is interwoven with the texture of the plants. The aromatic plants, the clove, cinnamon, and the peruvian bark, all owe their chief excellencies to the intense light of the equinoctial regions.

CHRYSANTHEMUMS.

Chrysanthemums have long been considered a great ornament to the conservatory, and their beautiful blossoms are frequently brought to great perfection, though we never see what may be considered as a handsome plant, and we never shall, till the old system of growing the plants in pots the whole year round is done away with. I have given my plan two years' trial, and can with confidence recommend it as a great and decided improvement. In the month of April, I take as many suckers of each sort as are wanting, and I plant them out, in good prepared ground, about two feet apart. As soon as they begin to grow, I stop them, and continue doing so with each succeeding growth, until they begin to assume a shrubby appearance, not staking them, but allowing them to grow at pleasure. If a succession of plants be wanting to blossom very late, or rather in the commencement of the year, I keep topping a few on purpose, and in dry weather I water them with the drainings of all the manure. This is the very essence, and no gardener should lose it. On the 1st of September I pot my late chrysanthemums into thirty-twos, and start them by putting them into a close house for about seven days, until they have made young roots; not allowing the sun to shine upon them, and syringing them twice a day.—*Cuthill.*

Guano.—About three cwt. is the proper quantity of guano to apply to an acre. It is the better practice to apply it broadcast in wet weather on the surface of the ground, and harrow it immediately.

Method of Freeing Trees from Moss and Insects.—The following will be found an excellent application for freeing trees of moss and insects. The mixture is made by taking five bushels of well-burnt lime, fresh from the kiln, and slaking it with hot water in which salt has been dissolved. When the lime has fallen to a fine dry powder, add, by small quantities at a time, a bushel of soot, stirring it in till the two ingredients are completely incorporated. Advantage is taken of the first foggy day, when the trees are damp, but not dripping, to dust them over with this powder. One man may operate upon fifty trees in a day, and it should be repeated twice a year; the first time in March and the next in October and November.

Salpixantha Coccinea (The Scarlet Trumpet Flower).—This handsome shrub is a native of the Island of Jamaica, and we are indebted to Mr. Purdie for its introduction into this country, who transmitted it from that island to the Royal Gardens at Kew. In its habit, it is a low branching shrub. The flowers are produced on a spike, which sometimes proceeds from the axils of the leaves, and the flowers appear on this spike in pairs, from opposite sides of the stem. They are tube-shaped, resembling a trumpet, whence it derives its name; in colour they are bright crimson, the inside being white. In this country it blooms in the autumn and the beginning of winter, but it requires a stove to bring the flowers to perfection. It is one of those flowers which prove a great ornament to our greenhouses and our conservatories, but the climate of its native place is a certain indication that it cannot ever be expected to be naturalized to our gardens

DECEMBER.

CALENDAR OF OPERATIONS IN THE FLOWER, FRUIT AND KITCHEN GARDEN.

THE FLOWER GARDEN.

FIRST WEEK IN DECEMBER.

Picotees and Carnations are yet growing fast. Protect the plants from continuous rains, but keep them uncovered as much as possible ; a sparing supply of water should be given where the soil in the pots is getting dry.

Dahlias.—Look over the roots occasionally ; see that the stems are not decaying away in a moist state, if so, remove them to a drier situation, and cut away as much of the affected part as you possibly can with safety to the roots.

Tulips.—The planting of the bulbs, we are fully aware, is not yet completed, although the fibres have shot forth half an inch or more ; this should be avoided by planting earlier.

Protection of Tender Plants.—Many tender ornamental shrubs and plants, which stand our summers, and ornament our gardens, require protection from our winters. Of these may be enumerated many plants, hitherto treated as greenhouse plants, which the toil of the cultivator may wish to acclimatize, or to render sufficiently hardy to stand our variable climate, by inuring them gradually to stand in the open air. The most likely situations for such experiments are those which are sheltered by nature, and where the soil is either naturally or artificially dry. Plants originated from seeds ripened in our greenhouses, are to be preferred in the first instance, and great care taken to protect them by artificial means, in the open air, until they have perfected seeds. Plants originated from such seeds are supposed to be more likely to stand unprotected, and so, in proportion, are the progeny of each succeeding generation. Plants which annually die down to the ground are the most likely to be acclimated by this or any other means, and a slight protection of their roots may be considered sufficient ; but those which rank as shrubs and trees, are not so easily protected during winter, and should be planted against warm sheltered walls, or in sheltered places in the shrubbery, where in either place they can be partially protected by sticking a few fern fronds, or branches of trees around them, or entirely covered with mats, or portable cases, during severe frosts. The roots of all tender plants should be particularly protected, by covering the ground round them either with littery dung, saw-dust, or coal-ashes. Where valuable or exotic plants may have been planted and trained against the walls, which may be considered as an immediate station between the greenhouse and the shrubbery, they should be protected at their roots, and the more effectually to secure them, a portable glass case may be made use of, which would sufficiently protect them till the return of spring. Such a compartment for the cultivation of many interesting shrubs and trees, too tender to stand unprotected with us, is much wanted, and, indeed, portable conservatories would have their uses. All plants in pots should now be removed into cold frames or pits before the first attacks of frost, as, if left unprotected, many of them would be destroyed, although hardy enough of themselves to resist extreme cold when planted in the natural ground. While in such situations, they should have plenty of air admitted daily, and only protected during nights and very severe days with glasses or reed mats, which will effectually protect them from cold, as well as heavy rains and snow.

Auriculas.—If the season should prove to be a mild one, we recommend close search to be made for insects. It is now very probable that these truly beautiful flowers are beginning to exhibit the future vigour of their blooms, on which account the greater facility exists of making the proper selection with some degree of certainty. One of the criteria of a proper choice is, when laying hold of the plant, it remains firm in the pot; for it should be particularly observed that those plants which at this time are not well established in their pots, will scarcely have time to recover themselves so as to form a strong and vigorous bloom. It is a false notion, too universally prevalent, that auriculas ought at this season to be abundantly supplied with water, on the ground that, as it is a plant which comes early into excitement, a due provision ought to be made by moisture to supply the succulency of its habit. We consider that auriculas at this season ought to be kept moderately dry, watering with caution and prudence, all decayed leaves to be removed, and to expose them as much as possible to the air, when the weather is dry and mild. In those days when the weather is genial, the drainage of the pots should be well examined, and the stage or house in which the plants are placed cleared of all filth and dirt, which may prove the refuge of snails, slugs, woodlice, &c., which are injurious to potted plants. Take particular care that the glazing of the frames is complete, for nothing tends more to the destruction of plants than the drip from the tops of the frames and lights.

Pansies.—It would be advisable to examine the pansy beds after every frost, for it is a plant that is very apt to be thrown out of the ground by frost, which, when discovered, the plant should be immediately pressed down into its place, and a proper dressing given to the bed. It may happen that some of the pansies may in the course of this month be showing for bloom; but if the flowers be not in request, it will add greatly to the strengthening of the plants to pick off every bud as it appears. All seedling plants must be well protected, for it should be considered that young plants will succumb to the influence of frost, when those which are more matured will successfully resist it. If the pansies be in pots, fresh air should be given to them on every occasion, when the wind or weather is genial, carefully protecting them from north-easterly winds, and from too much wet or cold. Little watering is necessary, for it ought to be considered as an invariable rule in the management of plants to be sparing of moisture when they are not in a growing state. The best compost for the pansy is loam, leaf mould, cow-dung mould, in equal parts.

Anemones and Ranunculuses.—The anemones and ranunculuses which were planted in autumn, will now require protection from the influence of the frost. The anemone has been frequently known to bloom in the middle of the frost, but the flowers do not survive the rigour of it. It is not advisable to place heavy litter over the beds, the lighter it is the better, and it should always be removed when the weather is mild. If it be intended to plant anemones and ranunculuses in February, the beds should now be prepared, and the soil thrown out in ridges that it may be mellowed by the influence of the frost; and it will be beneficial at times to turn it over, so that amelioration of the soil may be general.

Dressing Flower Borders.—All vacant spaces should now be rough dug in the flower garden beds or borders, where there are no plants, and all those borders which are planted, that have not been dug, should be neatly and carefully pointed over, taking care not to injure any of the plants in the process. The digging over flower garden borders at this time not only gives this department an appearance of order and neatness during winter, when there is little else to attract the eye, but it actually saves much time and trouble in the spring, when the gardener is usually busy; independently of which it is attended with advantages, such as turning up the eggs or larvæ of insects, and even many of them, whilst in this torpid state, can be picked off by the birds. It ameliorates strong stiff soils, and renders them capable of being easily put into neat order in the spring. It admits the rain and snow to penetrate to the bottom of the borders, and to deposit certain salts beneficial to the growth of plants, and, in fine, it gives a character of keeping to the whole, that the hard-beaten surface never can present.

Hyacinths, Tulip Roots, Anemones, and Ranunculuses.—In the beds in which the fine hyacinths and tulip roots are planted, some occasional protection, when severe weather, would be of great advantage in preserving the roots more effectually sound, or from material injury. On that occasion, either cover with a low awning of mats, &c., or provide some kind of dry, long, strawy litter, peas straw, fern, or such like, and when the frost appears to have set in hard, lay a tolerably warm covering over the surface of the beds; but when the weather is less severe, all covering must be removed. When any of these plants of the more estimable and curious kinds, in beds, appear above ground, it would be of material advantage to afford them some occasional covering with large thick mats, as already directed in time of severe weather. The same treatment may be observed with the beds of ranunculuses.

Tender Shrubs.—The roots of tender shrubs should be mulched with light dung, to keep the frost from them; and several sorts of exotic plants, such as the magnolia, rhododendron, azaleas and kalmias, in hard weather, will be better to be covered with mats. Shrubs of all kinds may now be pruned, and the borders dug. Cut out all rambling luxuriant shoots that appear to be superfluous, and form the plants so that they may appear in a regular manner, and not crowd one another. Several sorts will require stakes to support them, and the stakes should be covered with the branches, so that when the leaves are exposed they may not appear. Clear the borders of all sorts of litter, and dig them neatly. Many sorts of shrubs may be increased by suckers. The lilac, the syringa, spiræ, frutex, and several kinds of roses put forth plenty. They may be taken up and planted in nursery beds, five or six inches apart, and in a year or two transplanted to where they are wanted.

Planting Hedges.—This is a very proper time to plant any sort of the deciduous kinds, particularly such as hawthorn, beech, elm, hornbeam, privet, elder, barberry, blackthorn, or sloe. Procure young sets of two or three years' growth; prune the long tops to equal regularity, and trim long, straggling roots; then plant them either in a single row or double, for a strong outward hedge, six or eight inches apart in the row. Alder, willow, and poplar hedges may also be planted in moist, marshy, or watery places, or where required, either by rooted young plants, or small or large cuttings of the shoots and branches. Hedges, for outward fences, are commonly planted on the side or top of a raised bank, formed with a ditch on the outside, the sets being inserted either slopingly into the side, or upright on the top of the bank; but internal garden hedges are planted in level ground. When fence hedges are grown up tall, rude, and naked at the bottom, they may now be plashed, or laid down, to render them thick in every part, performed by gashing the lower parts of the larger stems, so as to admit of bending down in the requisite position, conformably with the smaller branches, laying them down accordingly between other stems left erect for growing stakes, cut even at top, three, four, or five feet high.

Operations in the Greenhouse.—Continue to take advantage of every fine day when the weather is open, to admit fresh air to the plants in the greenhouse; for this, notwithstanding the generally unfavourable temperature of the weather at this season, is a very necessary article for the benefit of plants in general. If they be kept too close, it will not only, in some degree, render the plants weak and tender, but also occasion the leaves of some kinds to change to a yellowish sickly colour, and be frequently dropping. Therefore, every day, when the weather is mild and the wind not keen, let the windows be opened about nine or ten o'clock in the morning and shut again about three or four in the afternoon, or sooner, if the air becomes too cold. But never omit giving a large share of fresh air every sunny day in mild weather; or occasionally, in giving air in mild weather; if the wind blows rather keenly towards the front of the greenhouse, some of the top sashes only should be drawn down a little way, so that the wind cannot enter below, immediately upon the plants. It will not, at this season, be proper to allow the greenhouse any fresh air in foggy or very wet days, for at such time let the house be kept quite close. In severe frosts the windows must never be open. In continued severe frosty weather great care must be taken to secure the doors and windows of the greenhouse in such a manner that the frost cannot enter that way to affect the plants; therefore, in the time of very rigorous frost, the window shutters must be closed every night; and for the greater security, it will also be proper to nail up mats against all the shutters, or in default of shutters, apply an eligible defence of large, thick mats, against all the glasses above and below, especially at night; or, also, occasionally in the day time, when continued severe weather and no sun. Likewise, when the frost happens to be very severe, it will, for the better protection of the plants, be advisable to make a moderate fire, if there be the accommodation of flues, which are very necessary in every good greenhouse, both as an occasional defence against the rigours of frost, and to expel great damps in foggy and wet weather; but in default of flues, in hard frosts make a moderate fire in some convenient vessel, and place it within the greenhouse, towards the front, observing to move some of the plants a little way, if too near where the fire is placed. But as such fires are only particularly necessary in the greenhouse in sharp, frosty weather, they should be continued accordingly every night and morning, and sometimes all day, when the frost is excessive, but always wholly discontinued in moderate, open weather, or only made occasionally in very foggy weather, and after great thaws, to expel the damp.

SECOND WEEK IN DECEMBER.

Auriculas.—Look over these plants, and give water sparingly where necessary, for small quantities of moisture must be kept up. Continue to pull off the lights while the weather continues fine and open over head.

Pinks.—It will be necessary to go over the beds every other day, and press the soil firmly to the roots of those plants loosened by the worms.

Picotees.—Keep the plants clean by clearing them of dead foliage; this is an important part of their management at this season of the year. A little water must still be given if wanted, and air and light at all times, weather permitting.

Dahlias.—It will be advisable to look over these roots every now and then till the stems are dry, and safe from decay.

General Directions.—The heaps of compost that have been prepared for the flower garden should now be turned over, in order that they may be mellowed by the influence of the frosts. Mix some fresh composts, that the requisite quantity may be prepared at least eight or ten months before wanted. Take advantage of mild weather, and dig and prepare the beds and borders ready for planting flower roots in the spring, in the performance of which it will be proper to lay the earth up in a ridge, that the heavy rains may run off, which would render the earth too wet for planting if the beds were laid flat to receive them. Prepare such parts of the garden where it is intended to plant flowering shrubs or tender sorts of trees out in the spring, but it will be proper to observe that the garden should be laid in ridges till the season for planting is come, so that it may sweeten and mellow. Clear lawns and grass walks of leaves and litter of every kind, that the grass may not be injured. If they be rolled occasionally it will do them good.

Anemones and Ranunculuses. — Such of these as were not planted in autumn, may be now planted, if the ground be dry, and the weather mild, but it is only in very light soils that they will succeed at this time, the proper time of planting being October and November, and in wet heavy soils in February and March; the latter planting will prolong the season of flowering.

Plants in Pots.—The campanulas, rockets, stocks, wall-flowers, &c., in pots, placed according to the directions already given, in a situation where they may be defended from bad weather, should be particularly attended to at this season; a few of any, or of each of them, may be placed in a stove or forcing house, to bring them forward for flowering in the greenhouse or drawing-room.

Seedling and other Plants. — The young tender seedling exotic plants in beds should now be sheltered in sharp, frosty weather; this may be done by an awning of some low hoop-bent arches placed across the beds, and when the frost is very severe, cover over with some good mats; or, in severe weather, some light substance may be laid, such as fern or peas straw, abont their stems and their tops, observing to take this away as soon as the frost breaks. Let all plants in pots be also very well secured from frost. In order to protect the roots more effectually of all kinds of hardy shrubs and plants in pots which remain in the open air, it would now be proper to plunge the pots to their rims in a dry, warm lying spot of ground. But the more curious and tender kinds of young evergreens, and other tender plants in pots, should now be generally removed into some place of occasional shelter for the winter, either in frames, to be protected from frost with glasses and other covering in very severe weather, or under some awning, to be defended with garden mats, &c., on similar occasions.

Pruning Shrubs. — Now go over the flowering shrubs, and prune such as stand in need of that discipline, but let this be done in some regular manner with a knife, and not with garden shears. In doing this, all the very strong, long, rambling shoots of last summer's growth, extending considerably beyond the general branches of the head, should either be cut close, or reduced to some regularity, as also any main branches advancing in similar disorder, or of low straggling growth, and cut out dead wood. Observe generally in this occasional regulation to prune in such order as to keep the plants distinct and clear of one another, giving, therefore, attention, when any branches of different shrubs are extended confusedly together, to prune them within some orderly bound, whereby to continue them separately distant, that every different plant may show more distinctly to view, though sometimes particular compartments of common shrubs are permitted to run in close growth, both to effect a variation in a thickly appearance, and for shade, shelter, blind, &c., in which very little pruning is required, except to reduce any remarkable out growing ramblers. When the shrubs are pruned, let the ground in the open shrubberies be dug between the plants, and take off all suckers, and shorten straggling roots.

Watering Plants. — Water must now be given in a very sparing manner to the potted plants. Few of them will be in an active state of vegetation, and, consequently, they should be supplied in very moderate quantities, and at pretty long intervals, perhaps once in eight or ten days. Some may require water oftener, and many kinds may only need a little once in two or three weeks, as all the succulents, and such as may now be termed dormant. Nothing is more pernicious to these plants in winter than damp, they should, therefore, be carefully divested of damped leaves as they appear, and every means should be used to expel humidity or foul air, such as clearing the outside of the pots of green mould and stirring the surface of the earth with a stick. The borders, taken in a general sense, should be kept in a state much more dry than moist.

CARE OF TENDER FLOWERS.—Attend to all tender plants in pots, which have been placed in frames, cold pits, &c., where they may be defended from bad weather by glasses, or hoops, or mats. They should have air every fine day, and in moderate weather should be entirely exposed to it, covering them up, however, in bleaching rains, snow, and in hard frost.

OPERATIONS IN THE GREENHOUSE.—The days in this month being short, and the weather being very uncertain, particular care should be taken of the greenhouse plants; some days prove mild and open, others wet and foggy, and frequently, to sum up all the disasters, some severe frosts set in. Whenever the air is mild, the windows should be partially opened in the middle of the day for a few hours, endeavouring to let the plants have as much as possible the benefit of the small share of the sun at this time of the year. When the days are even cloudy, if the weather be serene, air may still be admitted in the middle part of the day, but if it be foggy or very wet, the glasses must then be kept close shut, and a small fire kindled to dry up any damp within. Care must be taken that the frosts do not penetrate so much into the house as to freeze the earth in the pots or tubs; in those houses, therefore, where there are no flues, the doors and windows must be well secured with mats, &c., so that the frost cannot enter. It must, however, be observed that if the greenhouse be shut in darkness a considerable time together, as it is done on ungenial nights, the consequence will be that the leaves will become sickly, yellow, and soon fall off, and if this practice be long continued, the branches will lose their leaves, which will decay and infect the whole tree, and in time the whole plants in the house, destroying first the weakest and afterwards those of the strongest growth; but, on the contrary, if the glasses be left too much open, so that the frost may penetrate into the house, many of the plants would perish by the cold; in order, therefore, to avoid the effects of very cold frosty weather, where there are no flues, an iron stove may be placed in the middle part, towards the front of the house, and a moderate fire made in it, or, where in want of such convenience, some large candles may be lighted and placed in the house, which will tend to expel the frost and damp from the plants. Water must be given to such plants as appear to require it, particularly to those which are of the woody kinds, as oranges, lemons, myrtles, &c., but only in very moderate quantities. To the succulent plants, as aloes, sedums, cotyledons, &c., water should only be applied to such of them as seem to require it, and that only during a mild sunny day, in the forenoon, when the windows may be opened to dry off any damp arising from such waterings. The greenhouse plants in general should be kept clear of all dead decaying leaves, lest they infect those which are in health; and those which have contracted any dirt or foulness should be cleaned, and the house in every respect kept perfectly clean.

CARE OF POTS AND BEDS OF EXOTICS.—In frosty weather, care should be taken to protect the tender exotic trees, shrubs, and plants in pots, either by sheltering them with frames and glasses, or otherwise by securing them from severe weather by mats or canvas; also the exotics in nursery beds, especially young evergreens, should be well guarded from inclement weather by frames and glasses, or hooped over and covered by mats, litter, fern, peas haulm, or anything that can protect such young plants from the injuries caused by severe frosts, snow, or heavy rains.

THIRD WEEK IN DECEMBER.

AURICULAS.—The auriculas in pots should be well protected from the rain, snow, or sharp frosts, for although these plants be hardy enough to stand the winter exposed, yet, by giving occasional protection, they will flower in greater perfection. The choicest varieties should be removed in their pots about the end of October or beginning of November, and placed in a covered stage, or in a bed arched over with hoops, in a warm, dry situation, where they can be covered when the weather is unfavourable; but let the covers be constantly taken off when the weather is mild and dry. An ex cellent compost for auriculas is made of fresh maiden loam, from an old pasture, well enriched with the dung of sheep and cows, well decomposed together, with the droppings of poultry and pigeons, and night-soil. all thrown together for a year or two, to free it from insects and dissipate any injurious rankness of the materials. Sea or river sand, blood, sugar, loam, and goose-dung are also added to the compost by some eminent growers. If the season be mild, dress the plants with the above-mentioned compost. or any other that may be conveniently at hand; but if the weather be unfavourable. the business had better be postponed. Whenever it is done, however, the plants should be cleared from all dead leaves, and the old earth taken away from the top, and round the sides of the pots, as low as can be conveniently done without disturbing their roots: fill up the pots with the earth that has been prepared, and when this work is finished, return the pots to the place intended for sheltering them.

Carnations.—The choice carnations in pots should be well protected from severe frosts, snow, or cold heavy rains; for if this be not done, many plants may be destroyed, or greatly injured thereby. If the layers be in small pots, these should be plunged to their rims in dry earth, or dry rotten tan, in a hotbed frame, which may occasionally be covered with glasses, or for want of such convenience, the beds may be arched over with hoops, and, in bad weather, covered with mats; but at favourable opportunities in good weather, the plants should have the free benefit of the air by entirely taking off the coverings laid for their protection; the carnation plants should likewise be guarded from hares, sparrows, mice, and other vermin, which prey on them in bad weather.

Dahlias.—The dahlias should undergo a regular examination, to see if any of the tubers be rotted, and when that is found to be the case, the putrid or rotten parts should be carefully cut out, or they will in time spoil the whole of the tuber. Some growers recommend the rotten tuber to be immediately planted, when it will most probably throw out a plant, although the tuber may gradually rot away; we, however, prefer cutting out the diseased part, as it is not always available to push the tuber into growth, especially if a forcing house be not ready at hand.

Planting Bulbs.—Various sorts of bulbous roots, as narcissus, jonquils, crocus, snowdrops, iris, pancratiums, frittillarias, which have been kept out of the ground till this time, should now be planted, if the weather prove open; they may be planted in the same manner in the borders as hyacinths or tulips, observing to plant the low flowering bulbs towards the front, and the taller ones more backward in the borders.

Hyacinths and Tulips.—In severe frosty weather, it would be of beneficial advantage if the beds in which the choicest kinds of hyacinths and tulips have been deposited, or any other various bulbous roots, be covered either with an awning of mats, or in default thereof, with straw, fern, or dry, long litter, that it may be removed as soon as the severe weather is over. But when any of the above-mentioned plants, of the most curious kinds, begin to appear above ground, it would be of much advantage to have the beds arched over low with hoops, &c.; and when the weather is unfavourable, such as in severe frost, let the mats be drawn over the arches and fastened down, so that the wind may not blow them off, but when the weather is open let them be constantly uncovered. The finest kinds, particularly of hyacinths, tulips, ranunculuses, and anemones, well deserve this care bestowed upon them.

Crocuses and Snowdrops.—Any sort of crocuses or snowdrops may still be planted for an early spring bloom; if dry, mild weather, generally planting them along the edges of the flower borders, next the walks, and in flower beds, some merely within five or six inches of the edge, either in a continued row, or dotted in little patches, planted about two inches deep; although those designed for the borders appear to a greater advantage when disposed in small patches than in a continued row. Draw a small circle with your fingers, about four or five inches in diameter; in the middle plant one root, and plant three or four round the edge of the circle. About eighteen inches, or two or three feet further, make another circle, and plant the roots as above, and so proceed to the end of the border. Or the patches may be varied, in having some near the edge, and others more towards the middle, observing, if you have different kinds, to plant each sort separate; and if you plant the first patch with yellow crocuses, plant the next with blue, and so proceed with the others of different sorts. Snowdrops may be planted in exactly the same manner as the crocuses.

Pansies.—At this season of the year the pansies that are in pots should be placed under frames for protection, or they should be plunged in tan or sand, in order to prevent the frost from penetrating to the fibres. A material injury would thereby be committed to the plant, and its period of blooming considerably retarded.

Prune Flowering Shrubs.—The various flowering shrubs in the flower garden, not before pruned, should now have it done at once. Let all dead wood and trifling small shoots be cut off, also all straggling and luxuriant shoots should be taken off, leaving only those of a moderate growth; and even where these are crowded, they should be thinned, so that the sun and air may have their influence, and let no branches near each other interfere with those of the adjoining shrub; when the pruning is finished, clear off the cuttings, and let the ground between be dug up, all suckers taken up from between the shrubs which have sprung from the roots, and the weeds turned under ground, so that the whole shrubbery may appear clean and neat.

Care of Seedlings.—Auricula and polyanthus seed may now be sown; for which procure some light, rich mould, intermixed with decayed willow dust, which may be put into boxes, tubs, or large pots; these will prove convenient for removal into a shady situation in summer. These boxes should be placed in a warm situation. Leave the seeds on the surface of the mould, and cover them with the same earth about a quarter of an inch, taking care to defend them from severe frosts, heavy rains, or snow. The boxes, or pots of other seedlings, as ranunculuses, anemones, hyacinths, cystuses, &c., should be attended to in hard frosty weather, by covering them with mats, straw, &c., both on their tops and round their sides; also those sown in the common ground should be protected in inclement weather by mats. Litter may be laid over them, but when the weather proves mild, such covering should be removed.

Fibrous rooted Plants in Pots.—The pots of double sweet-williams, stocks, wallflowers, rose campions, lychnis, and chrysanthemums should be placed under glasses, or hooped and covered with mats in hard frosty weather; these plants should also be screened from heavy rains, snow, or cutting winds; but if the weather prove serene and mild, such covering must be taken off, and if there be the convenience of old tanner's bark, or very dry earth, by plunging the pots therein it will greatly protect the roots from being frozen; or the pots of plants may be greatly guarded from the effects of severe weather by being sheltered in a shed, and kept very little moist in their roots.

Greenhouse Plants.—The usual severity of the season will not allow the greenhouse plants to have much air now; but let there be no opportunity lost of giving them that advantage when it can be done with safety. In the worst weather, every evening, the shutters on the outside of the windows should be closed, but when it is approaching to mildness they must be refreshed with air whenever the sun shines well upon the place. A confined air is destructive to all plants; at this season, therefore, manage carefully in guarding the tender kinds from cold, and occasionally giving them as much air as will prevent their decay. If the gardener should keep his greenhouse shut up for a considerable time together, in the same manner as it is necessary to do in the severest nights, he would see the destruction of his whole collection come on gradually; but even the first notice he would receive this way would be so late, that a great deal of the mischief would be done without the hope of a remedy. The leaves towards the extremities of the branches in several kinds would drop off, and by the time he had knowledge of this by the falling of two or three, numbers would have lost their hold and means of nourishment, and, in spite of all his care would follow. In the meantime the contagion of those decayed leaves would extend itself through the whole place, like the mouldiness of an apple or pear in the fruitery, and those plants whose principle of vegetation had been so strong that they resisted the first mischief, would perish like the others from the latter.

FOURTH WEEK IN DECEMBER.

Protecting Flowering Shrubs. — If you have hardy flowering shrubs or evergreens in pots, in order to protect their roots from the frost, the pots should be plunged to their rims in the ground, allotting them for this purpose a dry warm situation, where water is not apt to stand; or, if not plunged as above directed, place them close together in a warm situation, and in very severe frosts apply some straw litter between and over the pots, in order to protect the roots. But any tender or more curious young evergreens, &c., in pots, should have the protection of frames or occasional covering of mats, &c., in severe weather. Protect also the roots of the choicer kinds of newly planted trees, flowering shrubs, and evergreens from frost, if it should set in hard. This is done by laying dry mulchy litter on the surface of the ground, close round the bottom of the stem of each tree and shrub, as far as their roots extend or rather farther. Likewise support all such newly planted shrubs or trees as require it with stakes, that they may not be displaced by the wind.

CHRYSANTHEMUMS.—The plants of some of the chrysanthemums that are grown in pots, and have been taken into the greenhouse, will be found to have pushed a number of suckers. If the offsets be wanted for an increase of the species, the stem should be cut down so as not to rob the suckers of that nourishment which would otherwise go to the support of the parent plant. Attention must be paid to watering, as the roots absorb much, if given to them. So much do we admire this handsome genus of flowers that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plant.

ANEMONES AND RANUNCULUSES.—If the weather prove mild and open, the roots of anemones and ranunculuses which have been kept out of the ground for a late bloom should now be planted, to succeed those put in the ground in autumn; for the reception of those roots make choice of a dry light soil, which, formed into beds of three or four feet wide, and the surface laid smooth, and a little rounding, the roots may then be planted in rows about two inches deep, seven or eight inches row from row, and five or six inches asunder in the rows, smoothing the mould over the roots. Those roots of the common sorts and of less value may be planted in the flower borders amongst other roots in patches, five or six together, at about four inches asunder; then patches should be so planted at known distances, that when their leaves and stalks are withered, they may more easily be found, and the roots taken up and reserved until the following season.

POLYANTHUSES.—Those which are in the open borders should now be rigorously examined, in order to discover if any slugs or other vermin have taken refuge amongst them; all decayed leaves should be removed, and the earth occasionally stirred between them. It is now a proper season to sow the seeds of polyanthuses, in pots, boxes, or seed pans, in a light fine sieve. The seed should not be sown thickly, but sprinkled slightly over the surface, and a little mould should be sprinkled slightly upon it. Particular care must be taken not to allow the soil to become thoroughly dry, for the seeds would not then vegetate, but most likely rot in the ground.

CARNATIONS AND PINKS.—Great attention must now be paid to choice pinks in pots, whether placed in frames or under hoops and mats. If it be wished to have some of these flowers early in the greenhouse or the drawing-room, they may now be placed in the stove or other forcing compartment at work, for the purpose of being brought forward. In order to have a succession of flowers, a few may be taken in every two or three weeks till the first of April. Let them be properly attended to, and train their flower stems as they advance, and when just opening into flower, remove them to the greenhouse or to the dwelling-house, as shall be thought most proper.

PERENNIAL FIBROUS PLANTS IN POTS.—Double wallflowers in pots, double stocks, and double sweetwilliams, and any other of the choicest kinds of perennial plants in pots, should be well secured from severe frosts. If these plants in pots be placed in frames, let the glasses or other covering be kept over them at all times when the frost is keen, or occasionally in very wet weather; but in mild, dry weather, the plants must not be covered. Take care now also of all other choicest kinds of fibrous rooted perennial plants in general, which are in pots, in order to secure them from frost, such as the double rose campion, double scarlet lychnis, and all other such like kinds. Those plants which are in pots should, when there is not convenience of frames, be plunged to their rims in a dry and warm border, and in severe weather covered with long litter; but if the pots be not plunged, they should be well defended, or moved into some sheltered place at the approach of severe frost.

EARLY SPRING FLOWERS.—Ten week stocks, mignonette, and other flowers in pots for blooming early in the spring, to adorn a room or greenhouse, should not now be overwatered, and be kept free from frost; a cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. Tender evergreens newly planted would be benefitted by a little mulch of any kind being laid over their roots during hard frosts. If additional soil be required for flower beds upon grass lawns, advantage should be taken to have it conveyed at this time, so that the turf be not injured by wheeling.

HYACINTHS.—The beds of choice hyacinths, if not covered as directed in November, should now be covered, in order to preserve them from severe frosts. If the weather be very changeable and wet, they should be defended from its bad effects by hoops or mats, or canvas covers, which covers, however, should always be removed in dry weather, and should only be applied in the time of heavy rains—snow will do less harm — and if covered properly, the roots will be safe from the effects of frost.

Tulips.—They must be allowed the benefit of all the air possible, consistent with their protection from frost. Covering at night must be particularly attended to, but in this respect considerable judgment is necessary, for from the inconstant and invariable character of our English climate, it is not at all unlikely that the weather in the evening may be mild and open, and before morning a very severe frost may have set in; it is, therefore, advisable to err on the right side, that is, to cover the beds as soon as it is dark, and uncover them as soon as day breaks in the morning.

Planting Bulbs. — Various bulbs, such as hyacinths, jonquils, pancratiums, narcissuses, frittillarias, crown imperials, &c., may still be planted in light, dry soils, if not planted in October and November; but in heavy and wet soils, it is better to defer planting till the end of February or March. Crocuses and snowdrops may also be planted, arranging the colours so as to produce effect, if in beds; or they may be planted for temporary lodgings, or in patches of ten or twelve roots each, by the sides of the walks, or under the shade of trees and shrubs, where scarcely anything else would grow. The more common kinds of narcissuses, crocuses, and snowdrops, together with winter aconite, eranthus hyemales, helleborus nigra, helleborus lividus, and helleborus atrorubens, will give relief to the glooom and dead appearance of the grove in winter, and give rise to pleasing associations in the shrubbery. These may now be planted, and if once introduced nto the shaded parts of the pleasure ground will not readily be lost. The more tender lants, such as oxalis, gladiolus, ixia, &c., hould be protected by covering tho border ver with moss, fern, or litter, to resist the rost. Many of these are found to flower mnch better when planted ont in borders, endered dry, and sheltered, than those rown in pots and kept in the summer-house.

Shrubbery and Flower Borders.—When the weather is dry the shrubbery hould be dug over in a neat manner, which ill greatly encourage the growth of the hrubs, as well as give the whole a more greeable appearance, and render it much asier to keep in neat order during the sumer by the hoo and rake. It is seldom ecessary to give manure to shrubs; but hen the roots of them becomo so matted nd entangled as to render digging amongst em impracticable, it may then be necessary top-dress them with any light mould that is free of weeds; this will greatly encourage their growth as well as give the borders a neater appearance. In very old shrubberies, digging is unnecessary; all that is required is merely to keep them free from weeds and decayed leaves by means of the hoe and rake. The flower borders are differently constituted, as they are never allowed, under good management, to become impenetrable to the spade. They require an annual digging, and that must be over carefully performed, for fear of injuring the plants which are underground, or burying those that are small.

FRUIT GARDEN.

DECEMBER.

Vines.—This is the best of all seasons to prune and regulate grape vines, observing to leave a reasonable number of the young and strongest shoots or branches in every part of the tree, for it is from these the fruit-bearing shoots are produced in the ensuing spring; these young branches should be trained where any vacancy appears, and some portions of the former bearers, and naked old wood, may be cut out to give a supply of young shoots, pruning them to some strong shoots of the last summer's growth; those old branches which have advanced beyond their proper bounds should likewise be shortened, and those which are quite destitute of young shoots taken off to make room for the young shoots towards the bottom of tho plant. When the pruning is finished, let the shoots bo neatly nailed up.

Standard Fruit Trees.—The standard fruit trees consist principally of apples, pears, plums, and cherries; these should now be examined and thinned, if crowded with too many branches, so that the air and light can have access to every part of the tree. As standards are allowed fully to extend their branches in every direction, all the pruning they require is to clear some away where too thick, those which grow irregularly crossing each other, dead branches, and those which are worn out or decayed, so that the trees have a regular share of fruit. Where the principal branches are too much crowded with small shoots, let the worst of them be regularly thinned out, observing to cut them close down from whence they sprang, for if left with stumps having a few buds, such buds will come forth and produce nothing but confusion in future; if any of the principal branches cross or pass each other, the worst of these should be pruned out, as likewise those which are not productive, or extend far beyond the rest. The smaller branches should be regularly thinned where they appear crowded, and by thus clearing the tree of all superfluous branches, the fruit will be larger, finer flavoured, and the produce much greater.

Management of Fruit Tree Borders.—Where any of the fruit tree borders are poor or of bad soil, or much exhausted, and want manuring, or, indeed, of being revived with an augmentation of fresh earth, this is now a very good time to do that work. For that purpose, get from a pasture common, or elsewhere, a quantity of good fresh earth, loamy, if conveniently attainable, the top spit—or in want of this, other substantial good soil—and some of the best thoroughly rotten dung; or in default of proper earth, apply a good coat of dung alone. Let these materials be laid equally upon the borders in which the improvement is most wanted, which must then be regularly dug or trenched, one good spade deep, working in the addition of fresh earth, or dung, in a proper manner, according to the width and depth of the said border; and this dressing, to poor or much exhausted soils, will be of great service to the trees in general, as will be seen in a summer or two after in their growth and fruitful production, and will be particularly beneficial to such trees as are in a weakly declining state. Or borders of ordinary good soil may be continued in a fertile state by application of dung only, once in two or three years. In open weather, dig and prepare such borders, or other places, as are to be planted with fruit trees, for this being a leisure time, that work can be done in a proper manner. If any of the wall trees appear of a weakly, declining, sickly state, open the earth about the roots, but not to disturb them generally, and then apply a compost of fresh loamy soil, or other good earth, and some dry rotten dung, well incorporated together; worked in immediately about the principal roots, and towards their extreme parts; it will greatly enliven the growth of the tree the following year.

Newly Planted Trees.—Take care of newly planted fruit trees, which were planted during the two preceding months, and let their roots be well secured from frost, but particularly those of the more valuable and desirable kinds. This must be done by laying mulch, or some kind of dungy litter on the surface of the ground about the trees, and let this be laid full as far each way as it is supposed the roots extend. Support all newly planted standard fruit trees, where it is required, with stakes, especially those with high stems and tolerably full heads, and that are in exposed situations, open to the power of winds. In doing this, observe, previously to tying them to the stakes, to twist a piece of hayband, or something similar, round the stem of each tree, on the part that is to be fastened to the stake, in order to prevent the bark from being galled or injured when the tree is rocked by the wind, and then let each be securely tied in an upright position to its respective stake or stakes, which should be driven previously into the ground.

Gooseberry and Currant Trees.—Gooseberry and currant trees may still be transplanted where they are wanting, any time this month; when the weather is open, plant about seven or eight feet distant in the row. Plant some red and white currants against walls in different aspects, for producing earlier, later, and larger fruit. A few of the best early gooseberries may be planted in a south exposure. This is still a very proper time to plant cuttings of gooseberries and currants, to raise a supply of young trees. The method of preparing and planting them will be found in the operations for October and November. Gooseberry and currant trees may very easily be raised by suckers from the roots, of which these trees never fail to send up every year an abundance, and they will make handsome bushes, and will bear plenty of good fruit.

Prune and Plant Raspberries.—Prune raspberries, where it was not done in October; in the pruning of them, the same method is now to be adopted as in the preceding months. Now is also a very good time to plant raspberries, provided it be open weather; the manner of preparing these plants, and planting them, is also the same as mentioned in the preceding planting months.

Prune Wall Trees.—When the weather proves favourable, the peach, nectarine, and apricot trees may still be pruned, without much danger of their suffering by bad weather, as likewise plums and cherries. In order to forward the work, so that it may not interfere too much with the other business in future, let it be performed as directed in the former months, minding to have the shreds with which they are to be nailed up no longer nor wider than is sufficient to keep the branches in their proper positions, allowing room for their summer's growth, which would otherwise be much retarded; no more shreds and nails should be used than are absolutely necessary to keep the branches in their proper places, for when the trees are crowded with such fastenings, the form and beauty of the tree are much disfigured, Plums and cherries on walls and in espaliers may also be pruned at this season.

Strawberry Beds.—If the strawberry beds have not in the former months been cleared and dressed, it may now be done in open weather. Clear way from the principal plants all runners and small plants, and lay loamy earth between the plants, and dig it in neatly; after the beds are thus finished, dig the alleys, and the winter's work may be considered to be finished.

Fig Trees.—Let all the principal shoots be nailed up close to the wall, but it would not be advisable to prune these trees at this time; it is better to defer that operation until February or March, but it will be necessary to nail up all the shoots to the wall, the better to secure them from the frost and the power of the wind. It will likewise, during the season of very hard frost, be proper to shelter the best fig trees, by an occasional covering of mats, in order to protect the young shoots which are to bear next year, for they being soft and succulent, are more liable than those of other fruit trees to suffer by severe frost.

Apricots and Plums.—The leading shoots and branches of such trees as have not filled their spaces, and which are considered as yet in training, must be shortened, and otherwise be treated in the usual manner. But small shoots that abound with fruit-buds, and are well ripened in their extremities, may be laid in between the leading and other branches, there to remain as stationary, and no longer, till they have ripened off their fruit. If any were laid in last season and still remain, let them now be cleared away.

KITCHEN GARDEN.

DECEMBER.

General Directions.—If the weather prove frosty, take the opportunity of removing the dung of the old melon and cucumber beds to the vacant spots of ground that require manure, which, when the weather becomes mild, should be spread and trenched by laying it in ridges to remain till the spring, when it may be levelled down to receive the crops. This management will greatly meliorate and enrich the ground. Examine the trees and hedges, destroy snails, slugs, &c.; also nests of caterpillars in their cobwebs on the tops of branches. Snails harbour under all kinds of shelter, and should be searched after in hard, frosty weather. Repair gaps in hedges, and secure broken parts of fences; let the seeds that are thoroughly ripe be cleaned out of their husks or pods, the tools put into good repair, and everything made ready for managing the business of the succeeding months. Compost and manure heaps should be formed and turned over, observing to place the former surface in the middle, so that the whole body may be as equally acted upon by the weather as possible. The various crops protected from frost should be frequently removed to prevent their destruction from damp, and this can only be effected by uncovering them for a few hours in dry, mild days. In severe frosts additional covering may be required, and it need scarcely be observed, the lighter and drier such coverings are the better.

Artichokes.—Those artichokes which were not earthed up in the last month should have it done in the beginning of this, previously cutting the leaves off close to the ground, which should be taken away, then ridging up the earth over the sides and tops to protect them from the effects of severe frost, snow, or wet, as already directed in November. Observe, in banking up these ridges, to smoothen them with the spade, to admit the rain readily to run off; but if this ridging be not performed before hard frosts have set in, so that the ground is not easily penetrated, there should be no time lost to lay plenty of litter, &c., over them, that will defend the roots from being damaged, which, when the weather becomes mild, may be taken off and laid between the rows, to be replaced during any succeeding bad weather.

Beans.—Some more magazan beans may, in the beginning of the month, be planted, in order to succeed those planted in the former months, and about the middle of the month may, likewise, be planted the taper, long-pod, Sandwich and Mumford Beans. These will follow in succession those planted at the latter end of November. Let them be planted in rows, about three feet asunder, and between two and three inches deep, and three or four inches from each other. If the early beans be up, let some earth be drawn round the stems to defend them from any cutting winds and sharp frosts, taking advantage of a dry day for the purpose. Those beans which were sown thickly in order to be transplanted, should be protected from frost, snow, and heavy cold rains, and for the like purpose more beans may be put in the ground, in the same manner as before directed in October.

Asparagus.—If the beds of asparagus were not earthed up the last month, it should be no longer delayed; the stalks which are now fully withered must be cut down and taken away, and the weeds hoed into the alleys. The ground in the alleys should then be dug up, and some of the earth spread neatly over the bed, and the sides banked up as you proceed; draw the weeds into the bottom; when the beds are thus earthed up, the alleys may be planted with a row of beans.

CABBAGES FOR SEED.—When the weather is open plant some of the largest and full grown cabbages and savoys for their seeds; make choice of those which have the fairest heads, and firmest and shortest stems: take them up on a dry day, strip off all their large outward leaves, and hang them up with their heads downwards two or three days, to exhale the moisture; being then fit for planting, make choice of a dry, warm spot for their reception, fully exposed to the sun and open air. The best manner to plant them is to open a trench a full spade deep, making the side that is dug even, upright, and straight, and place the cabbages and savoys in an upright position therein, at two or three feet distant from each other, and their heads not more than five or six inches above the level of the ground. When one row is placed proceed to fill the trench by digging another, laying the earth to the stalks and roots, and raise them in a hill, so that the whole may be covered except the top of the head; wherever the flower stalk is to arise, then continue another trench, and plant the other row at about three feet distance from the first, and so on according to the number of the plants. These heads will flower in the spring, and ripen their seeds in the summer. Two different sorts should not be planted near each other, but in distant parts of the garden, for the purpose of preventing a mixed breed. Cabbage and Savoy stalks may also be planted in default of heads; they, having strong sprouts, will also produce their flowers and seeds at the above times.

CARROTS.—Where young carrots are desired early, you may, if dry, open weather, and if not done last month, dig part of a warm border and sow some carrot seed, to try the chance of having a few to come in forward.

CAULIFLOWER PLANTS.—The cauliflower plants under bell or hand glasses should have proper attention given them; in dry, mild, weather the glasses should be taken off for a few hours in the middle of the day, or tilted up for three or four inches, but if the nights be cold and frosty, let the glasses be kept on. Those under the lights will require the same treatment. The cauliflower plants under arched hoops, &c., should be well covered with mats in bad weather, but when it is mild they should be exposed to the open air, by turning the mats half over, leaving the plants open to the south; and those plants under walls should, in such weather, have some light litter, peas haulm, &c., thrown over them for their protection; also, if very wet weather happens, the glasses should be tilted up to carry off the rain more readily. All the cauliflower plants in general should have their decayed leaves picked off as they appear, the mould stirred between them, and where they are grown with long stems, it will be great protection to refresh them with the addition of new earth.

CELERY.—When the weather proves dry, embrace the opportunity to earth up such rows of celery as require it. Let the earth be broken small, and laid carefully up round the plants to within five or six inches of their tops, taking care not to break any of their leaves, nor to let any mould get into their hearts; but if severe frosts set in, the rows sufficiently blanched for use should be covered with fern, peas haulm, or litter, &c., to prevent the earth being frozen; or a few of the best plants may be taken up and laid in earth in some place under cover, and some litter be laid over them. They will then be ready for use in very hard frost, when the common ground is become so hard as to render it difficult to dig them up in the usual manner.

CHARDOONS.—The chardoons which were not earthed up last month should have it done this; take the opportunity of dry open weather to tie the leaves up with a hayband, break the lumps of earth, and bank it up round each plant in a smooth manner, to let off any heavy rains, and in sharp frosty weather lay some litter over them to keep off the frost; or some may be taken up and laid in earth in a shed, and covered, to be in readiness for immediate use in frosty weather.

ENDIVE.—Endive which requires blanching should, the first dry, windy day, be taken up and hung for two or three days in a shed, &c., to evaporate the moisture; then let the plants be each tied up almost to their tops, gathering up the leaves regularly, and laid by the roots in some dry earth, either under frames or in a place of shelter; here they will be ready for use in very severe weather, or the plants may be put in such places, and straw, &c., only thrown over them, which will protect them from rotting or freezing, and at the same time they will get sufficiently blanched for use.

LEEKS.—If there be the prospect of severe weather, it may be advisable to take up a portion of the crop of leeks, and store them away in sand or earth in some dry shed or cellar. Take from them all decayed leaves as, otherwise, the bulb may be reduced to rottenness.

Lettuce.—In dry, mild weather, the lettuce plants in the frames, and under bell or hand glasses, should be fully exposed in the daytime to the open air, but if the weather prove wet, the glasses should remain over them, and be only raised some inches to admit air; and in severe weather an additional covering of mats, peas haulm, or litter must be adopted. The decayed leaves should be taken off as they appear, and the mould between the plants frequently stirred. A little lettuce seed may now be sown on a warm south border, the plants from which will be fit to transplant in the spring.

Onions.—Particular care should be now taken to clear the beds of onions of all weeds. The Welsh onion is apt to die down in winter, but the roots will shoot up again, which, when they begin to do so, if earthed over an inch or so, they will become white, come forward, and eat the milder for it. Examine well the onions that are in store, and remove all the bulbs that show any signs of decay or rottenness; preserve them carefully from damp.

Mushroom Beds.—Care should be taken that mushroom beds be well protected from wet and frost by a good covering of dry straw, at least a foot thick, but no longer than while it remains dry, for if it become wet it should be replaced by fresh straw, and if the mats or canvas be laid over the whole, it will assist in keeping the straw dry, by more readily carrying off any heavy rain, and also secure the straw from being blown away by any strong winds. They should be occasionally examined, in order to ascertain if any wet has penetrated to them. Take the opportunity of a mild, dry day to expose the bed to the sun and air in the middle of the day, but the straw must immediately after be replaced. A mushroom bed sometimes will not be productive for several months after it is made, but if, on examination, the spawn appears to be alive and in vigour, and smells well, the care of the bed should not be neglected, as sometimes the spawn breaks forth into activity, and furnishes a considerable crop of mushrooms two or three months afterwards.

Peas.—In the beginning of this month, if the weather prove open, make choice of a good spot of ground, where the situation is warm, to receive a crop of peas, to succeed those sown in the last month. The ground should be trenched up in slight ridges at two feet and a half asunder; let drills be drawn on the south sides of these ridges, for the seed, of which the best kinds for this sowing are the early Charlton, Golden Hotspur, Reading Hotspur, Master's Hotspur, &c. Draw the drills an inch and a half or two inches deep, and sow the peas pretty thickly, lest a few be destroyed in bad weather, and cover them with the earth about an inch; another sowing may likewise take place towards the end of the month of the above sorts, as likewise some dwarf marrowfats, at the distance of three or four feet asunder row from row. The peas of a former sowing should have some of the earth drawn up to their stems, to defend them from frost and cold winds. Make choice of a dry day for this work, and let the lumps of earth be broken before it is drawn up to the rows.

Parsnips.—Parsnips are not good till arrived at maturity, when they may be taken up and preserved as carrots; they may, however, remain longer in the ground, as they are seldom hurt by frost, so that some of the roots are generally left in the ground till spring, then take them up for use just as they begin to shoot; if they be not wanted for seed, they will keep good in sand till the end of April.

Radish Seeds. — Radish seeds may be sown in this month, if it be open and dry. Make choice of a warm border, sow them pretty thickly, and let them be well raked in, after which the ground should be directly covered with straw, litter, or fern, an inch or two thick, until they come up; the straw, &c., should then, in the daytime, be taken off, but replaced at night and in severe weather. The plants will be more secured from bad weather, and the ravages of birds, if frames and glasses be placed over them, observing to take off the glasses in mild weather, and occasionally to admit air by tilting them up at the back a few inches.

Brocoli.—On the approach of settled frost, take up all the pots in which early purple brocoli have been planted, and remove them to a frame, pit, or shed, where they can be sheltered from the extreme severity of the weather, but let them have air when it is milder. By following this method, you will have a supply preserved for table in the hardest winter.

Seakale.—To grow seakale in the highest perfection, prepare the ground in December, by trenching two feet and a half deep; if your ground be wet in winter, it must be effectually drained so that no water may stand within a foot at least of the bottom; for the strength of the plant depends upon the dryness of the bottom and the richness of the soil; then divide the ground into beds, four feet wide, with alleys of eighteen inches, after which, at the distance of every two feet each way, sow five or six seeds, two inches deep, in a circle four inches in diameter. This must be performed with great care and regularity, as the plants are afterwards to be covered with the blanching pots. In May or June, when the sea-kale has made three or four leaves, take away all but three of the best plants from each circle, planting out those which you pull up in a spare bed, or to repair accidents. In November, as soon as the leaves are decayed, clear them away, and cover the beds an inch thick with fresh light earth and sand that has been laid in a heap, and been turned over at least three times the preceding summer; upon this dressing of sandy loam, throw about six inches in depth of light stable litter, which finishes everything to be done the first year. In the spring of the second year, when the plants are beginning to push, rake off the stable litter, digging a little of the most rotten into the alleys, and add another inch in depth of fresh loam and sand. Abstain from cutting this year, though some of the plants will probably rise very strong, treating the beds the succeeding winter exactly as before. The next season, a little before the plants begin to stir, rake off the winter covering, laying on a new one, an inch in depth, of pure dry sand or fine gravel; then cover each parcel with one of the blanching pots, pressing it very forcibly into the ground, so as to exclude all light and air. The beds and pots are now covered with hot prepared dung, and renewed when necessary, to a reasonable thickness, so as to warm the roots, and excite them to shoot. Examine them from time to time, cutting the young stems, when about three inches above ground, carefully, so as not to injure any of the remaining buds below, some of which will immediately begin to swell. In this method a succession of gatherings may be continued for the space of six weeks, after which the plants should be uncovered, and their leaves suffered to grow, that they may acquire nutriment to the root for the next year's buds; the flower stems, when seeds are not wanted, ought to be cut off as they appear. Be particular in guarding against too much heat, keeping the temperature under the pots as near fifty-five degrees Fahrenheit as possible, never higher than sixty degrees. Force slowly rather than quickly. Take care also to cut the leaves off a fortnight or three weeks before they decay, for such plants as you intend to force very early.

Spinach.—Any time this month, if the weather be open, spinach may be sown to come in early in the spring. The smooth, seeded, or round-leaved kind, is the best to sow for early spring and summer spinach in April or May. Sow a little seed once a fortnight or three weeks.

Eschalots.—This may be considered as a very proper season to plant eschalots. They require a good rich soil and free exposure, but it is better that ground be manured for the preceding crop, as they are apt to canker and become infested with maggots if they be planted in fresh dung. They may be planted in beds, at a distance of six or eight inches, or, which is a better way, in rows ten or twelve inches asunder, and three or four in the row. In light land they may be planted with the dibble, but in stiff soil it is better to place them in drills. In either case let the crowns of the sets be covered about two inches.

Garlick may now be planted; the same kind of culture will do as for eschalots, only allowing an inch or two more of room, and dividing the heads into cloves. It will thrive in any ordinary kind of garden mould, and will grow freely in English soil, if moderately rich.

Parsley.—Parsley may be sown the latter end of this month, either in beds or in drills, or as an edging to an alley or walk. It will do in almost any soil or situation. If sown in a bed, cover to the depth of a quarter of an inch; and if in drills, let them be half an inch deep, and ten or twelve inches asunder. Hembing parsley, the roots of which are used in soups, may be sown in drills a foot apart, about the latter end of the month. The ground for it should be deeply dug, in order to obtain large roots.

Small Salading.—Continue to sow the several sorts of small salad once in ten days or a fortnight, that there may be a proper supply for the table as often as it is required. The sorts are mustard, cress, rape, and radish; some Cape cabbage lettuce may also be sown, to cut whilst young, like the cresses and mustard. Let the seeds be now sown in a sloping bed of light earth under a frame and glasses, or in a hotbed, as has been previously mentioned (see November), but at this season, not to cover the seed deeper with earth than just as much as will hide them. In general, keep the glasses over them; but give air to the plants every day when the weather is mild, especially in hotbeds, otherwise they will be apt to tag; raise the glasses moderately on props, or occasionally the plants may have the full air in the middle of every dry, mild day, but be sure to keep the glasses close over them in cold weather; and every night, when the weather is sharp, cover also with mats or long litter.

French Beans may now be sown in flat boxes or pans, placed in an early forcing house, afterwards to be transplanted into large pots to stand in those compartments, or to be planted out in a slight hotbed, or into flued pits, as shall be thought most proper. The speckled dwarf is the best kind to sow. They should be sown thickly in fine light earth, and be covered to the depth of an inch. Let them have moderate supplies of water, and they will be fit to plant when about three inches in height.

Asparagus (to force). — Continue to make another hotbed for raising asparagus to succeed those forced in November, being previously provided with a sufficient number of roots, not more than three or four years old, from the seed. When the bed is made and settled, proceed to plant the roots; a three-light frame will require not less than five, six, or seven hundred roots, according to their size. Therefore, those who raise the plants for this purpose should every year sow a sufficient quantity of seeds to answer the demand, and afterwards transplanted to remain two or three years, to gain a proper size for forcing. The hotbeds now made should be of the best horse-dung, and full of heat; and at this time of the year should not be less than three feet and a half or four feet in height, to admit for sinking and lining. The length of the bed should not be less than a three-light frame to produce a proportionate quantity of asparagus at each gathering. The dung must be well mixed in making the bed, and regularly beaten down with the fork, and the frames and glasses put over, in order to draw up a fresh heat, which will be in two or three days, and then taken off, when the bed may have six or seven inches of good rich earth put on, for receiving the plants immediately; but as the heat of the bed is very strong at first, the glasses should not be put over the plants until its violence is abated, which probably may be in ten or twelve days after the bed is made and planted; but if heavy rains, snows, &c., should fall in the intermediate time, it will be proper to protect the bed from them, by laying some litter, peas-haulm, &c., over it, which should be taken off as soon as the weather becomes clear; when it is perceived that the heat of the bed is more moderate, the frame may be put on, as the young buds will begin to make their appearance; therefore, another parcel of fine mould should be laid on, the thickness of three or four inches, and fix some straw-bands round the edge of the bed at the top, to keep up the mould, and receive the bottom of the frame, which should now be put on, and more earth laid on, so that the depth of the whole mould from the crown of the roots may be six or seven inches; the lights may then be put on, observing, if much steam arises, to tilt the lights up behind, an inch or more, to let it evaporate, and admit some fresh air; when the heat is become moderate, some dry straw or litter may be laid round the sides and ends of the bed; this will protect it from being chilled by cutting winds, driving snows, &c., as also assist in keeping up its heat; but if it be perceived that the heat is declining apace, a lining of fresh hot dung should be applied all round the bed; this will tend to keep up its warmth, and assist the growth of the asparagus.

Cabbages.—The plants that were planted out in October or November will now require to be earthed up. Should there be any spare pieces of ground, more plants may be planted from the seed bed, which may be either drawn as coleworts, or suffered to remain as cabbages, to be used early in the spring and the beginning of summer. The plants may be set about six inches apart in the row, and the rows from twelve to fifteen inches asunder. When they are large enough, every other plant may be drawn, and then every head, leaving the remainder to grow for cabbages. The different varieties of the Yorks are the best to be sown, as they make excellent coleworts, and none exceed them for the size and excellence of their cabbages.

Care of Lettuce Plants in Frames. —If you have lettuce plants in frames, or under hoop-arches, defended with mats, let them enjoy the open air at all opportunities, by taking entirely off the glasses or other shelter when the weather is mild and dry. But in very wet weather, and when sharp cutting winds prevail, keep the glasses over them, observing, however, at such times, to raise the glasses or lights behind, two or three inches, in mild days, to admit air to the plants, for if they be kept too close they will be drawn up weakly, and attain to but little perfection; but let the glasses be close shut every cold night. In severe frosty weather, keep them close night and day, and cover the glasses with mats or straw, both at night, and especially in the daytime, if the sun appears, and the frost is severe; also, let the same care be observed to those under hoop-arches, but let them have the full air in dry open weather; or where any cos lettuce have been pricked out in a south border, close under the wall, it would be advisable in hard frost to cover them as above. In the above lettuce, in general, pick off all decayed leaves, and keep them always clear from weeds. Destroy the slugs, which often greatly annoy lettuces, and in mild weather stir the surface of the earth between them, which much enlivens the plants.

Rhubarb.—This is the most easy of all esculents to force, with the exception of seakale. The rhubard plant may be covered with an inverted flowerpot of a large size, and let it be covered with hot stable manure. Cover up as many as you may require for a week's consumption, and let the same operation be performed every week, so as to ensure a regular supply. When the fruit is ready to cut, take off only the longest leaves and stalks, and then cover up the root again for the next supply. There are numerous ways of forcing rhubarb, but the instructions now given will be sufficient for gardens of a moderate extent.

CULTIVATION OF CELERY.

At a meeting of the Horticultural Society, Mr. Cole, gardener to H. Collier, Esq., of Dartford, exhibited some very fine red celery, to which a certificate was awarded, and with it he sent the following account of its cultivation:—

"Herewith I take the liberty of handing you six sticks of celery, of a kind which I have grown for the last three years, and which I think, both in point of size, solidity, and flavour, will be found superior to any which has hitherto been cultivated. The specimens sent are not selected, but are merely examples of a general crop, planted without any object in view beyond that of the supply of my employer's table, and entirely without ever thinking of sending any of it for public exhibition. My stock consists of 600 plants, planted in rows, four feet apart, and the plants nine inches apart in the row; and I have not a doubt that the whole crop would average 6lbs. per stick. Not the least remarkable excellence in this celery is, that it will stand twelve months without running or starting for seed, and such a thing as a pipy or stringy leaf I have never noticed so long as I have grown it. For a more substantial detail of my method of cultivation, I may remark the seed was sown the first week in February, and so soon as the plants were large enough they were pricked out in garden soil, rich in vegetable matter, under hand-glasses. The trenches were prepared in the usual manner in the first week in June, by excavating them nine inches deep, and digging in a good dressing of the spent dung of an old mushroom bed. The plants were, of course, strong when they were planted out, and each was removed to the trench with a good ball of earth adhering to the roots, so that (afterwards receiving a copious watering,) they sustained little or no check. In earthing celery I generally endeavour to steer between the two extremes of frequent earthing, and earthing only when the plants are full grown, believing that a little earth after plants are fully established in the trenches, say a month after planting, promotes the rapid growth of the plants, more especially if they receive a good soaking of weak liquid manure or soot-water a day or two before they are earthed. Soot-water is an excellent manure for celery; and where worms and other insects are troublesome, a little dry soot dashed along the rows will be found a preventive to their ravages. The kitchen garden here being upon a boggy subsoil, and below the level of the river Dart, which passes through the grounds, I do not find it necessary to water the plants more than once or twice after they are planted out; but in more elevated situations it is almost impossible to give too much water, always, however, preferring to give a thorough soaking once every fortnight rather than daily dribblings, which in my opinion do more harm than good. Were I so disposed, I have no doubt I could grow this celery double the size of that sent; and to effect this I should prepare the plants as before directed, excavate the trenches eighteen inches deep and the same in width, and fill them with a compost consisting of good turfy loam, peat, and leaf-mould, or thoroughly decomposed cow-dung, in about equal quantities. Very rich dung is not good for celery, and strong manure-water should also be avoided. To grow large celery it would be necessary to place the plants eighteen inches apart in the row, and the ground should be kept constantly stirred about the plants, taking great care, however, to prevent the soil getting into the hearts of the plants during the operation. In a late number of the 'Journal of the Horticultural Society,' I perceive Mr. Errington attributes the coarse and bad quality of the large celery grown for market to the luxuriance of its growth. Here I venture to assert he is wrong. The bad quality of the celery is attributable to the bad kinds grown, as I am quite sure no person could grow this kind of celery, which has been named Cole's Superb Red, so as to make it either pipy or stringy or inferior in flavour. Late earthing has more to do with making celery stringy than anything else, and it is quite certain if the leaves of celery be exposed to full light and dry air for a length of time the tissue will become harder than if the leaves were grown in comparative darkness. We need no stronger proof of this than the acrid flavour of the outer as compared with the inner leaves of the same celery, a fact demonstrating that if the leaves be exposed for a long time they acquire an acrid flavour which no blanching can wholly remove. For an early crop of celery I sow in heat early in January, and prick the plants out upon a slight hotbed; for a second crop in February in heat, as before directed, and for a late crop in March in the open garden."

Mr. Errington has since written the following remarks on the above reference to him:—

"Mr. Cole has misquoted the substance of a paper of mine on celery cultivation, given in vol. iii., p. 297 of the "Horticultural Society's Journal." He says, 'I perceive Mr. Errington attributes the coarse and bad quality of the large celery grown for market to the luxuriance of its growth. Here I venture to assert he is wrong.' Now it so happens that this is diametrically opposed both to my real views of the matter and to my opinions, as expressed in the paper alluded to. What I objected to was, very early sowing for the main crops. I still beg to aver that celery sown in the end of January will assuredly be less tender, and, indeed, more stringy, than the same kind sown in the early part of April. So far from objecting to extreme luxuriance in growth, I consider such alone as the key-stone of the arch. It will be found by Mr. C., on referring to the paper in question, that I recommend sowing in contact with rotten manure, 'pricking out' on rotten manure, and very frequently using manure-water during its cultivation. Once more my opinion is, that he who cultivates his celery in the most luxuriant way, all other circumstances being equal, will grow it finest and most tender, whether it be sown in February or in April.

GARDENING FOR LADIES.

Ladies, we are not going to recommend you to dig up your own ground, to save fourpence a rod, which you had better pay to some poor labouring man for the work; nor to fork the dung out of the muck-hole, nor to wheel about the savoury load on a barrow; we leave these graceful and lady-like avocations to be taught and recommended by your own sex; but there is gardening that a lady may perform without shoeing herself with iron, confining her ancles with straps and buckles, or placing herself in the particularly graceful attitudo which brings the head almost as close to the ground as the feet. We have seen Shropshire and Welsh women working in market gardens by hundreds, at a shilling per diem, but even the market garden women are not set to the debasing occupation of digging the ground, throwing the dung out with a fork, or wheeling about muck in a barrow. We hope and believe there is not a masculine writer living who would insult his country-women by teaching the ladies of England any such humiliating lessons, and we regret that any one of their own sex should have so lowly estimated the moral and intellectual worth of the female character. A woman as strong as ordinary men could only save a trifle by doing the filthiest work in the garden, and to suppose there are ladies who would so debase themselves, betrays a sad ignorance of the respect due to the weaker sex; writers, however, estimate the minds of others by their own, they do not recommend people what they think would be humiliating. The author of "Gardening for Ladies" may, and perhaps does, think the laborious work of digging the soil a lady-like occupation, the herculean task of forking out the dung from a muck-hole a feminine amusement, and wheeling about the offensive load in a barrow, and inhaling the odoriferous exhalations, a healthy and invigorating recreation. She may think that

> "To be nice about trifles is trifling and folly;"

and the consciousness that such exercise is perfectly consonant with the exalted state of the female mind in England, has innocently laid her country-women open to the sarcasms of our European and American brethren, who gather from that very book what to them appears evidence that the ladies of Great Britain do for amusement what they have done by the lowest class of labourers, the filthiest drudgery of the garden. As some thousands of our work reach both our continental and American friends, we beg them to be assured that the Ladies of England do not follow the instruction in "Gardening for Ladies;" that the humblest female drudges in the market garden would spurn such labour if offered them, and that sensible people treat the work as a gratuitous attempt to lower the character of the British fair in the eyes of other nations. Ladies, we offer no such insult; we would see you training and supporting the delicate climbing plants, tying up the pods, and directing the petals of the carnation and picotee, checking the exuberance of flowering shrubs by pruning, changing or increasing the variety of roses by budding, tending the exotics in the greenhouse or dwelling house, and such other work as is not inconsistent with female delicacy; but "Gardening for Ladies" is simply the performance of those operations which are light and not inconsistent with grace and elegance. Gardening is gardening all the world over. If a thing requires deep digging to grow well, it will not be satisfied with the shallow digging by a lady. Plants study nobody's convenience; if they want a pailful of water they will not be content with a quart because the Queen of England administers it. See the management a plant requires, do such parts of the work yourself as may befit a lady, because they require but little labour; but we should be very sorry to see so injurious and humiliating an opinion promulgated abroad, as that the ladies of England dig, and wheel barrows, and dung the ground in the gardens, and that lady writers actually teach them how.

HYACINTHS IN THE OPEN GROUND.

Hyacinth bulbs are chiefly imported from Holland, as our readers are aware, and it is our present object to show that in these days of quick and cheap locomotion, if any person should take a fancy to have a bed of some five or six hundred hyacinths — a person in the trade, for instance, as an advertisement—he might make it answer his purpose, and very possibly would discover that the bulbs may be propagated and prepared as well in England as in Holland.

From the steeple of Haarlem church, in the middle or latter end of April, you may look down upon a sea of hyacinths, of all colours, in bloom, covering hundreds of acres with their beauty, and filling the air with their perfume. At this time it is that the annual sales take place; and any one attending them may not only revel in the delight of inspecting this beautiful flower in all its varieties in their now naturalised locality, but, by purchasing a quantity, make it worth his while to take the trip. And if he returns without having a bed of his own the next season, he will exhibit a deficiency of floral enthusiasm for which I should not envy him.

Should any one feel inclined to try the experiment, a few hints may be acceptable.

1. The roots of the hyacinth are known to penetrate to the depth of three feet; and though drainage may seem to be of little consequence to a plant that grows well in water alone, yet this would be found a mistake. In sodden earth the roots canker, decay, and perish, as soon as those of any other plant. The soil in which they are to grow must, therefore, be three feet in depth, below which there must be sufficient drainage. It should be managed, in short, just as the pit of a tulip-bed is; only it is to be remembered, that the hyacinth must not, as the tulip may, be planted afterwards in open ground where there is not sufficient *depth*, *pabulum*, *freedom;* otherwise all previous labour on that bulb is lost, and it must begin again *de novo*.

2. The offset bed must be prepared in the same manner, and with at least equal care with, if not quite as deep as, that of the principal bed. The soil at Haarlem is so sandy, that iron spades are all but unknown there. Wooden spades are used; and with one of these I have dug to the depth of above four feet without coming to anything that could impede the further penetration of the hyacinth root. No wonder, therefore, they thrive like the free citizen of Athens of old; there is nothing to cramp or hinder them from thriving. In England this must be procured artificially; but I do not think this will involve trouble or expense to an amount prohibitory of growing them for profit.

3. The soil, as I observed, is either a light but rich sandy peat, or pure sea-sand, rich in salts; so rich, indeed, that the oak flourishes there, as may be seen in the valleys in the midst of the sandhills between Haarlem and the sea. It is in this that the bulbous and tuberous plants thrive so surprisingly; and I believe it is the soil and the mode of cultivation, not the climate, that make the difference between the English and the Dutch-grown hyacinth. Make the soil, therefore, approximate to that of Haarlem; let half or two-thirds be sea-sand, and one-third peat or leaf mould, the whole sufficiently watered with ocean salts—chloride of sodium, sulphate of soda, and sulphate of magnesia; to which may be added with advantage a little nitrate of soda and muriate of ammonia; the whole of which salts, sufficient to impregnate compost for a bed to grow one thousand hyacinths, would not amount to five shillings; and the compost will last from seven to ten years without changing.

4. To ripen its seed the plant exhausts itself; therefore, those not intended to seed should have the stalk cut as soon as the flower becomes unseemly. The ripening of the bulb, and perfecting its embryo spike of

buds for the next season, is a matter of some delicacy on which the Dutch lay great stress; and the following is the plan, as far as my memory will give it twenty-three years after date. The spike being cut as soon as the bloom begins to fade, the plant is left until the leaves have become sere half way down. They are then carefully raised, with as much root as possible, and laid in by the heel until roots and leaves have completely withered. Then they are dried in the open air, but under cover, until the callus to which the roots are attached will peel off like the boiled choke of an artichoke. The leaves are then cut close to the bulb, which is placed on a frame so contrived as to admit air around it to every part, with an entire protection from sun and weather. The frame, in fact, exactly resembles a bottle-rack with a pent-house roof, or that used for drying wood. When dry, they are separately wrapped in paper and labelled.

5. They are planted in October; but as in a show-bed it is very important to have all the colours in bloom at once—and as this is no easy matter, requiring not only a general knowledge of their times of flowering, but a particular knowledge of each variety—it may be as well to know how the Dutch apply this knowledge to compel them to uniformity. This is by planting the latest bloomers deepest; and my impression is, that the difference between the greatest and least depth is as much as a foot. And, as a general rule, I can myself answer for its being very decidedly thus: that the blue are the earliest in flower, and the deepest in colour the first, the red next, the white third, and the yellow last.—*Beck.*

SPRING FLOWERS AND SPRING GARDENS.

NUMEROUS as are our printed works on the different departments of floriculture, there is not one expressly upon Spring flowers; and as for a Spring garden, it is never so much as noticed. This cannot be owing to the subject never having been treated on; for there are various places styled "Spring Gardens," both in the southern division of the country and in the northern; and these places must have originally obtained their names from being principally appropriated to the growth of Spring flowers. But if it once were the practice to cultivate such flowers upon an extensive scale, the practice has now fallen off. Spring flowers are not the leading subjects anywhere: they are generally planted in detached spots, and concealed from the view by plants of more lofty growth.

This is the more to be regretted, as almost all Spring flowers, though small, are pretty; as the Spring is the time when a flower-garden is most wanted; and as, if placed in beds, or large groups of the same species together, they would have a very rich appearance.

They have other points of interest about them: they are all very hardy, and not injured by those vicissitudes of the Spring weather which are often so injurious to summer flowers, and that in the most early stages of their growth. They also require scarcely any attention; so that the cultivator has nothing to do but to place them in the appropriate situation, and leave them there, and they will not fail to grow vigorously and flower well. In order that they may do both with their full vigour, they are better on the south side of a wall, or in some situation where they are sheltered from the cutting winds of the north and north-east. Garden mould is the best soil for them all; and if it be light and friable, so much the better. Such of them as are bulbous, or have thick and fleshy divided roots, are the better for being ripened by exposure to the sun and air; but they ought not to be taken up until they are matured and their growth has completely ceased. As they are all hardy, and some of them but little changed by that simple culture which they require, it is not absolutely necessary to take them up and dry them; though even the hardiest of the bulbous ones, even those which grow beneath the snow, and occasionally bloom up through it, are all the better for being dried.

The great charm consists in their being in full bloom when there is scarcely another bloom in the garden, or even in the fields; and considering this, one feels a little astonished that they have not been planted in masses, whereby full effect would be given to their beauty. When once in the ground, almost the only treatment they require is to have the ground beneath them lightly forked and neatly trimmed, and the dead leaves carefully picked off early in the Spring. Generally speaking, their flowering and growth are completely gone before the summer flowers come into action; and thus they make a complete succession. They are exceedingly numerous; so that the following list, which is rather a copious one, contains merely a selection.

LIST OF HARDY SPRING FLOWERS.

Those marked b have bulbous roots, the

others not. The colour of the flower and average time of blooming are given at the end of the name of each plant.

Pulsatilla vernalis, purple—April. Cernus, blue—April. Halleri, blue—April.

Anemone pavonia, red—April, May. Varieties, variegated—April, May. Canonata, blue — April. Uralensis, April. Cærulca, April. Trifolia, white—April. Richardsonii, yellow—April.

Hepatica triloba, variegated—March, April.

Adonis vernalis, yellow — March, April. Siberia, March, April.

Evanthi hyematis, yellow — January to April.

Helleborus nigger, white — January to March. Purpurea, purple—March, April. Atrorubris, dark red—January to April.

Epimedium Macranthum, white—March, April. Biolaceum, violet—March, April. Musschianum, white—March, April.

Sanguinaria Canadensis, white—March, April.

Aubrietia deltoidea, purple—March, April. Purpurea, purple—March, April.

Persicaria reticulata, yellow — March, April.

Draba brachystemon, yellow—February, March. Aizoides, yellow—February, March.

Orobus vernus, purple—March to April.

Gentiana verna, blue—March to May.

Polemonium Mexicanum, blue—March, April. Reptans, blue—April to May.

Omphalodes verna, blue—March to May.

Chertensia pulmonæoides, blue — March to May.

Cyclamen corn flower, red—January to May. Vernum, red—February to May. Sepaudum, red—March to April.

Dodecatheon Shedia lilac—April to July. Integrifolium; violet—April to July.

Primula marginata, rose—March to April. Longifolia, lilac — April. Attaica, lilac—March to May. Longiflora, lilac—April to May. Longiscapa, lilac—March to April. Nivalis, purple—April to May. Carmatica, violet—April to May. Glutinosa, violet—March to May. Nivea, white—March to April. Acaulis, striped—March to April.

Soldanella montana, blue—April. Clusia, blue — March to April. Alpina, blue—April.

Cortusa Matthioli, lilac—April to May.

Iris susiana, brown and black—March to April. Livida, purple and blue—March to April. Subbiflora, blue—April to May. Lurida, dark purple—April to May. Biflora, purple, violet—April to May. Furcata, blue—March to May. Lutescens, yellow—April to May. Verna, blue—April to May. Hœmatophylla, blue—April to May. Lærigata, blue—April to May. Nertchinskia, blue—April to May. Nerthenica, blue—April to May. Tenax, purple—April to May.

Iris longifolia, purple and green—April, May. Tuberosa, b. violet—March to April. Reticulata, b. blue—April to May. Xiphium, b. variegated—April to June. Lusitanica, b. yellow—April, May. Caucasica, striped —February to April. Persica, blue and yellow—March, April.

Trichonema bulbocodium, b. purple—March, April. Purpurascens, b. purple—March, April. Columnæ, b. striped lilac—March, April. Ramiflorum, b. purple—March, April. Cœlestinum, b. blue—March, April. Speciosum, b. rose—March, April.

Crocus Vernus, b. variegated—February, April. Striatus, b. white, violet—February, April. Versicolor, b. white, blue—February, April. Odorus, b. blue—February, April. Suaveolens, b. blue, yellow—February, April. Biflorus, b. white, purple—February, April. Pusillus, b. white, purple—February, April. Præcox, b. purple, white—February, April. Albiflora, b. white—February, April. Variegata, b. yellow, purple—February, April. Argenteus, b. white, purple—February, April. Lusianus, b. yellow, purple—February, April. Reticulata, b. yellow violet—February, April. Sulphureus, b. straw, yellow—February, April. Stellaris, b. yellow, purple—February. April. Lœgenaflorus, b. straw, yellow—February, April. Lacteus, b. straw, violet—February, April. Aureus, b. yellow—February, April. Luteus, b. yellow—February, April. Mœsiacus, yellow—February, April.

Trillium sessile, dark purple — April. Petiolatum, dark purple—April. Cernum, white—April. Erectum, dark purple—April. Pendulum, white—April. Abovatum, white —April. Grandiflora, white—April. Catesbæi, red—April. Stylosum, rose—April.

Ornithogalum umbellatum, b. white—April. Refractum, b. white, green—April. Exscapum, b. white—April. Fimbriata, b. white—February to April.

Gagea fascicularis, b. yellow—March, April. Bracteolaris, b. yellow — March, April. Glauca, b. yellow—March, April.

Scilla cernua, b. rose — March, April. Amænula, b. blue—March, April. Amæna, b. blue—March, April. Siberica, b. blue—March, April. Patula, b. blue — April. Bifolia, b. variegated—February, April. Carnea, b. flesh-coloured—February, April. Præcox, b. blue—February, April. Verna, b. blue—March, April. Umbellata, b. blue —March, April. Italica, b. blue—March, April.

Hyacinthus orientalis, b. blue—March, April. Spicatus, b. blue–March, April. Amæthystinus, b. blue—April.

Mirscari moschatum, b. brown—April, Macrocarpum, b. yellow—April. Comosum b. purple—April. Monstrosum, b. purple—April. Celestum, b. white, purple—April. Racemosum, b. blue—April. Commutatum, b. dark blue—April. Peduncularis, b. blue —March, April. Botryoides, b. variegated—March, April. Azureum, b. bright blue—March, April. Album, b. white—March, April. Carneum, b. blush—March, April.

Tulipa stellata, b. blush, white—March, April. Montana, b. crimson—March, April. Patens, b. white, green, yellow—March, April. Biflora, b. white, violet, yellow—April. Præcox, b. scarlet, green—March, April. Persica, b. scarlet velvet—March, April. Suaveolens, b. scarlet, yellow—March, April. Scabriscapa, b. variegated—April. Pubescens, b. variegated—March, April.

Fritillaria, præcox, b. white—March, April. Cheleagris, b. purple, white—March, April. Minor, b. dark violet—March, April. Tenella, b. brown, purple—March, April. Nervosa, b. dark purple—March, April. Imperialis, b. yellow, red—March, April.

Amblirion album, b. white—April.

Erythronium dens-canis, b. purple—March April. Americanum, b. yellow — April. Longifolium, b. Rose—March, April. Albidum, b. white—April. Grandiflorum, b. yellow—April.

Bulbocodium vernum, b. lilac—February, March.

Helonias bullata, b. purple—April.

Galanthus nivalis, b. white—January to March. Plicatus, b. white — February to April.

Leucojum vernum, b. white—February to April. Carpathica, b. white—February to April. Æstivum, b. white—April, May. Pulchellum, b. white—April, May. Trichophyllum, b. white—January to March.

Narcissus obvallaris, yellow — March, April. Lorifolius, b. white, yellow—April. Bicolor, b. white, yellow—March to May. Tortuosus, b. white, straw — April. Moschatus, b. white—March, April. Cernuus, b. white—March, April. Plenus, b. white, double—March, April. Major, b. yellow—March, April. Maximus, b. yellow, green—March, April. Propinquis, b. yellow—March, April. Serratus, b. straw, yellow—March, April. Pseudo-narcissus, b. yellow—March, April. Lobularis, b. yellow—March, April, Minimus, b. yellow—March, April· Maclegii, b. straw, yellow—April, May. Sabini, b. straw, yellow—April, May. Tenuifolius, b. yellow—April, May. Conspicuus, b. yellow—March, April. Scortinus, b. yellow —March, April. Bulbocodium, b. yellow—March, April. Incomparabilis, b. straw, yellow—March, April. Montanus, b. white —April. Triandrus, b. straw—April. Jonquilla, b. yellow—April, May. Medius, b. yellow—April, May. Similis, b. yellow—April, May. Gracilis, b. yellow—April, May. Tenuion, b. yellow — April, May. Orientalis, b. straw, yellow—April, May.

Narcissus nutans, b. yellow—March to May. Concolor, b. straw—April. Pulchellus, b. white, yellow—April. Odorus, b. yellow — March. Curtisii, b. yellow—March. Bifrons, b. yellow—April. Cypri, b. white, yellow—March, April. Lacticolor, b. milk.—March, April. Primulinus, b. yellow — March, April. Teniticaulis b. yellow—April. Cupularis, b. yellow—April. Trewianus, b. white, yellow—April. Citrinus, b. white, yellow—April. Papyratus, b. white—February to April. Italicus, b. straw, yellow—February to April. Multiflorus, b. yellow—April, May. Angustifolius, b. white—April. Patellaris, b. white, copper—April. Stellaris, b. white, crimson—April.—*Florist's Journal.*

CULTURE OF THE CAPER PLANT.

THE caper grows naturally in many parts of the south of France, and a little care causes it to flourish perfectly well in the northern provinces. In autumn a single digging about the plants is all they require. In October, in order to afford them shelter, the stems are cut down to within six inches of the ground, and the plants are covered over with the earth of the intermediate spaces. This is all the protection they require during the winter. In spring time they are uncovered and trimmed; the old shoots are then covered up to the part where the plant appears to push forth its fresh part, and soon new shoots are seen. They soon get into flower at the commencement of summer, and continue to bear flowers as long as the freshness of the nights does not restrain the sap, Every morning the buds are gathered, because the largeness of the capers takes away from their value. When they have advanced beyond a moderate size, they are only good for cutting up, having become too hard to be left entire. No matter what precaution may be taken in the gathering, there will always be flowers which escape notice, and burst forth. They must then be allowed to go to seed, and when the capsules, still green, and large as an olive, are advanced enough, they are gathered and preserved. They form what is called the Cirnichon Caper. The daily gatherings are thrown into tuns of vinegar; salt is added in order to prevent the watery portion of the bud from weakening the vinegar; and different gatherings at last pass into the hands of the commercial picklemen.

The extreme simplicity of the cultivation necessary for this plant ought to place it in every garden. When planted near a wall exposed to the south, it will be found to succeed perfectly in this country. In winter it would be wise to cover the plants with matting, or straw. Abroad, on large plantations, it is customary to place the plants in the shape of a five of hearts, and at some distance from each other. They multiply very rapidly and the stems springing from the root, soon become numerous. However, it is easy to procure slips from the parent root. These plantations are sure to flourish, as the plant requires but little dryness and heat.

THE PEACH.

THE peach is a native of Persia, introduced into Europe by the Romans during the reign of Claudius, and is described by Columella, and afterwards by Pliny. The former says that when it was first brought into the Roman empire, it possessed deleterious qualities. Knight, however, supposes those peaches to have been only swollen almonds, or imperfect peaches, and which are known to contain the prussic acid which operates so unfavourably on some constitutions. The peach was deemed unwholesome in Media; but when planted in Egypt it became delicious and salubrious. In Asia it has been cultivated from time immemorial; but when it was introduced into Greece is not known. It is still cultivated in Italy, and is there grown on standards, superior to any other in Europe. The Montreal gardeners are noted for the fineness of their fruits, which they grow upon low walls; they divide their peaches into two classes, pavies and peaches; the first class or pavies we call clingstones, from the flesh adhering to the stones, and are with us held in least estimation, for want of sufficient heat to ripen them properly. In France they are esteemed the best, as well as in America. The second class, or peaches, are by us distinguished by the appellation of freestones, from the flesh readily coming away from the stone, and are by us held in the highest estimation; whilst, on the other hand, the French and Americans consider them to be inferior. The Americans are said to feed their pigs with the freestones, and to use the clingstones or pavies for eating only.

In America, indeed, the whole population has for several generations derived considerable advantage from the cultivation of this fruit. The late Sir Joseph Banks very justly remarked that it is there alone that the true management of this delicious fruit can be studied and attained, for it is impossible, from written precepts, to acquire the whole art. The modes of winter and summer pruning are varied, not only according to the difference of the soil and exposure, but even according to the state and constitution of every individual tree. Like the American peach growers, the French cultivate many sorts they have never budded, but always reared from the stone; and others they bud on stocks, of a sort of half wild peach, called *peche de vigne*. In consequence of this arrangement of one species of fruit coming under the management of individuals for many generations, they are brought to a degree of perfection which can never be attained in a garden, where fruits of all sorts, and a variety of other equally important duties fall to the share of a gardener.

In the United States, particularly in the middle and southern provinces, it is no uncommon circumstance for the owners of some of the peach orchards to be possessed of such a number of peach trees as are sufficient, after fermenting and distilling the juice, to produce from fifty to a hundred barrels of peach brandy; the manufacturing of this liquor, and the feeding of hogs, being the principal uses to which the peach is applied in those counties. In the vicinity of Buenos Ayres, in South America, where fire-wood is scarce, peach trees are raised from the stone chiefly for the purpose of burning.

Knight is of opinion that the peach may yet, by proper cultivation, be sufficiently hardened as to be naturalised to the climate of England; so as to succeed, even as a standard, in favourable situations.

Peaches require a somewhat rich and mellow soil, richer than that for the apple, and much lighter than that for the pear. It is of vast importance to have a naturally rich and light loamy soil for peaches; as the application of manure, if not very much decomposed, is apt to induce in them a luxuriant habit of growth, strong, ill-ripened shoots, and often diseases which hasten their death; whereas in a light, rich loam, or without much manure, they produce smaller wood, which will be both short-jointed, and will ripen well. Abercrombie preferred a soil composed of three-parts mellow, unexhausted loam, and one part drift sand, moderately enriched with vegetable mould, or the cooler dungs. The depth of peach borders need not be greater than from twenty to twenty-four inches; but this greatly depends on he substratum. Damp soil is destructive to peaches, and in such as cannot be rendered completely dry, it will be better to form borders for them considerably above the general level of the surrounding ground. As the peach is almost universally planted against walls in this country, although Mr. Knight and others have tried and recommended their cultivation as dwarf standards, and also as espaliers, it must only be in the most favourable situations that such a mode can be expected to prosper. and the sorts of peaches confined to one or two of the hardier sorts; being, as we have said, usually planted against walls, there cannot be any great difficulty in making the borders expressly for them. If this be not done in the first instance, there will be little certainty of ultimate success.

Peach-trees ought always to be trained in the fan manner. It is, indeed, not practicable to train them to any considerable extent horizontally, as they produce their fruit entirely on the shoots of last year, and these often require to be shortened, and the older branches to be cut entirely away, in order to obtain a supply of young bearing wood. A peach-tree may, therefore, be said to be always in training, inasmuch as there must be a constant cutting-out of old and encouragement of young wood in every part of the tree, even after it has been filled to the full space allotted to it. How near the older branches may be placed to each other is not very important. They may sometimes be pretty close, and sometimes more distant, according to the number and position of young shoots upon them. These, in a tolerably healthy and well-regulated tree, should be at the distance of five or six inches from each other. It is the regular arrangement of the young shoots, more than of the older shoots and branches, that produces health and beauty in a peach-tree, and which in summer exhibits a regularity of foliage, and in autumn a display of handsome fruit, in every part of the tree, highly pleasing.

The young shoots of the peach-tree often require to be shortened. This is to be understood of such as have been hurt by the frost, not being fully ripened to their extremities, bruised by accident, cankered, or mildewed; and more particularly of thos from which it is wished to produce a supply of other shoots, either to fill a vacancy, or for extension of the tree. Such as are strong and vigorous may generally be headed back one third of their lengths; those less strong, one half, and those very weak, back to two or three buds; observing always to cut at a *wood-bud*, which may be distinguished from a *fruit bud* by its being long and flattish, the latter being short and stunted. On strong shoots a wood-bud is frequently placed between two fruit-buds, and it is very proper to cut at such, generally cutting at half an inch above it.

In a tree extended to its full size, shortening of the young shoots is less necessary at or near to its extremities, unless hurt by frost, canker, or mildew, than in the lower part; because, the more we cut, the more the tree will grow, and as all trees naturally grow strongest at their extremities, it follows that we should cut least there and exercise the knife more freely on the lower and middle parts, in order to counteract this propensity, and obtain a regular supply of bearing shoots.

Mr. Knight, in his communication to the Horticultural Society on the training of fruit trees, dissents from the principle of fan training; but the method which he recommends evidently tends to produce a very ugly tree without gaining any advantage, since the peach wants to be continually pruned in order to obtain a supply of bearing wood. Mr. Knight's method strongly inclines to the horizontal; but it may be asked, what tree grows naturally in a horizontal manner? All, except this one, perhaps, grows upright, or, more properly speaking, in the fan manner, spreading out their branches on all sides. Surely none grow like the larch or the spruce, and it has been an universal maxim of the best horticulturists to direct the cutting out of cross wood, and to keep the tree moderately thin of branches in the middle.

SOILS BEST ADAPTED FOR SUCCULENTS.

By this title may be understood an immense tribe, formerly considered tenants of the dry stove, but now found to be more hardy than the geranium. It is, however, purposed to restrict the inquiry to the cactæ, as sufficiently comprehensive for the present purpose.

There are many persons now living who may remember the time when our greenhouses or stoves could exhibit few specimens of the cactæ, except the common creeping cereus, the melon, and torch thistles, and the Indian fig.

Now, however, the case is widely different, for such has been the success of collections, and so great is the facility with which the species are propagated, and varied by cross impregnation, that it would be vain to attempt a catalogue.

Even in 1831, Loudon's *Hortus Brittanicus* exhibited, under the order Opuntiaceæ, no fewer than eleven species of true cacti, twenty of mammilaceæ, forty-three of cereus, five of epiphyllum, thirty of true opuntia, and four of pereskia. Yet what are these amongst so many of more recent introduction, to say nothing of the endless varieties?

Having, then, so much choice, amongst a selection of surpassing beauty, it becomes an object to determine pretty accurately the soil that will generally succeed with all the varieties; but herein, as almost always happens, cultivators are at variance; yet as we do not pretend to dictate, and ever desire to "let well alone," we shall be content to allude to what we have not only seen or heard, but what we have also acquired from actual experience.

Formerly it was the custom to make pretty free use of old mortar; or soft or sandy loam, mixed up with fragments of broken bricks, formed the most healthy beds for the roots. Other writers and practical gardeners got rid altogether of lime rubbish, and retained but little loam; they advised, and many now use, the best or richest peat, as heath mould is called, with rotten manure, and give water freely, in the growing season, with liquid manure.

Be the soil what it may, certain it is, that it should be pressed firmly around the roots with the hands, till the ball be solid and compact, and little or no water ought to be given between October and April, during which period frost of two or three degrees will little affect plants; good drainage is also premised.

We are, however, certain that the herbage of cacti, if it may be so called, is greatly affected by the soil. In some collections, we observe the tint of almost every plant to be a dull brownish green, and the texture flaccid, in others it is of a full deep verdure, with every appearance of vigorous health. Conversing on this subject with a very successful grower, one who had prominently beautiful specimens of epiphyllum truncatum, grafted upon pereskia aculcata, we were told that loam spoiled all the cacti, and turned the plants brown. Our experience for years tended to confirm this observation, but time has not been given to confirm the truth of another remark, which we thus communicate, that our readers may experimentize for themselves. Our friend said, take equal quantities of very old black manure and of the strongest lime rubbish from old walls, the older the better, mix them thoroughly, and add about one sixth of unctuous loam. In this compost your plants will recover colour, be always green, and bloom abundantly. At all events, our informant's plants make good his words, and we shall attain our present object, if this paper excites the notice of observant and candid floriculturists.

CULTURE OF THE OLEANDER.

The genus or family is called Nerium, from nereus, derived from the Greek *(neros.)* moist, as the plant grows upon the borders of rivulets in the south of Europe; but Nerium odorum, and its varieties, the flesh-coloured and double-flowered, appear to be natives of the East Indies, discovered in 1683.

Nerium is referred to class V., order I., pentandria monogynia of Linnæus, and to section IV., the flowers of which have but one petal; the seeds are a follicle, that is, a carpel of one member rolled up like a leaf whose edges meet. The most familar example of this seed vessel is found in the common blue larkspur. The corolla of the single flower is cut in five divisions, which have a bend that gives them like the periwinkle, a contorted or twisted figure: the mouth is crowned with appendages cut like the edges of a pink. Stamens five, within the tube; anthers arrow-shaped, approaching at the tip, and adhering to the stigma; seeds numerous.

In the natural system, now become so fashionable, and which ought to be considered as a system of physiological botany, the genus is placed in the order termed apocyneæ, which takes as its type apocynum, dog's-bane. It contains plants possessing poisonous qualities. In general, the apocyneæ are acrid, stimulating, and astringent. These principles when in excess act so powerfully on the nerves as to produce stupefaction.

The entire plant of oleander is said to abound with deleterious juices, which should be tasted with caution. The plant if cut across bleeds freely, and the fluid, if tested by sulphate or acetate of iron, shows the presence of the gallic acid by turning instantly bluish black, owing to the formation of ink, or the gallate of iron.

The odour of the sweet-scented varieties is peculiar, not unlike that of the Tonquin bean. This fragrance it derives from an essential oil, not remote, we presume, from that of the kernel of bitter almonds, and of peach and laurel leaves, though being of far less intensity. Whenever this aroma prevails, which is indicative of vegetable prussic acid, poisonous qualities are to be suspected.

The leaves of the oleander are strong, and leathery in texture, beautifully organised and veined.

There are two varieties with single flowers—the pink and the white. They are now rarely seen, but are charming plants, and to the botanist most interesting.

There are also two with double flowers, and one of more recent introduction—*nerium flaviscens*—with yellowish flowers, from the East Indies, introduced, according to the catalogue of the *Hortus Britannicus*, in 1816.

All the varieties of this gem are of the most ready culture, but to those who are young beginners minute and specific information is essential. Two distinct methods will be described. The head of a full-grown plant is always well furnished with green pliable shoots, which grow usually in three's, as do the leaves, though both one and the other deviate from that general order of development. During any of the spring months, if these young shoots be cut at the length of three joints from their summits, close under, but not exactly through a point whence the leaves diverge, and those leaves be taken off at their point of junction with the stem, so as not to wound its bark, a set of cuttings will be procured, which may be treated in two several ways.

First.—Put any number singly into small bottles, or phials containing rain water, in quantity to reach half-way between the base of the cutting and the next point above it. Plunge the phials into a bed of warm leaves, dung or tan; or in very warm weather, try one or more of them in the window of a sunny room. White roots will gradually be sent forth, and when these become half an inch long, remove the cutting to a small pot of heath mould, or light sandy soil, adapting it to the tender roots with care, and giving gentle pressure with the thumb while the pot is being filled; the roots should not be more than an inch or an inch and a half below the surface. The soil ought to be made pretty moist, but not swamped with water, after which the potted plants must be put in a gentle heat under glass, and shaded till the firmness and colour of the leaves afford proof that the roots have adapted themselves to the soil.

We will, however, offer one caution.—Pure soft water is a medium wherein the oleander and many other plants will *produce* roots rapidly, but it will not sustain growth, and cannot be rendered efficient by the introduction of any vegetable decomposable substance. We once struck a cutting in water, and hoped to assist the plant by adding a little moss, but scarcely three days elapsed ere those fine milk-white elastic processes, which spread horizontally in the pure element, became of a dirty yellow tint, flaccid in texture and perfectly inert; the plant perished immediately.

Second method.—Plant each selected cutting singly in a small pot of, sandy heath mould, or very light reduced turf and sand; press the earth firmly about the cutting, water it, and place it in a stove or hot-bed frame. In moist heat, sixty-five to eighty degrees, and in shade, roots will be produced, and plants formed, which may be repotted when perfect balls show that the roots require more space.

The oleander will grow in any pure soil, light loam, rich turfy loam, loam with leaf mould, or black heath soil, or in the last-named soil alone. When in flower it affects much water, but few plants can endure aridity better; in fact, nature, by the organisation of its foliage, has prepared it to bear the extremes of wet and drought. Constitutionally, it is almost hardy, but young plants will not bloom freely unless they be assisted by heat, especially during the spring.

A third method of raising a stock of plants we unconditionally recommend, as by it not only may healthy plants be procured, but many that will bloom early in spring, when scarcely one foot in height. At any time during September and October, prepare a number of two or three-jointed cuttings by removing the lowest leaves, and making the heel of each, immediately under the joint, perfectly smooth. Place an inch layer of broken potsherds as drainage at the bottom of a pit six inches broad; upon that a coating of moss, then a compact soil consisting of one part of reduced turfy loam, and three or four parts of heath mould. Press this mixture firmly into the pit, water it, and make as many holes in it, close around the side of the pot, as there are cuttings. Into each hole pour half an inch of white writing sand, set a cutting upon the sand in the hole, so deep that it be at least midway between joint and joint; then fill the holes with sand,

and cover the entire surface of the soil with half an inch layer of the same; saturate the whole with water, and see that the cuttings be quite fixed and immovable without some effort. Upon this close contact of plant and soil depends much of the future success.

The pot of cuttings may be kept in a heat of from fifty to fifty-five degrees during winter, and many plants, as we have proved, will be found perfectly rooted in early spring. Amongst the cuttings taken from a full-headed strong plant, there will perhaps be several which have the beads of future bloom formed amongst the upper leaves. We have thus obtained young and blooming plants, which have expanded perfect flowers in April and May.

In every mode, and at every period of propagation, we advise that the grower attempt to obtain cuttings, or even layers, furnished with the germs of future flowers.

As to old plants, they prosper well in loam, and may be kept safely under greenhouse winter treatment, and being brought into a vinery at work, or a plant-stove at sixty degrees Fahrenheit, about February, they will in general produce terminal clusters of bloom at seasons varying between April and October. We know trees of from six to eight feet high that are often covered with flowers of great beauty and fragrance, and which are of necessity kept in the greenhouse only, and are exposed to the open air whilst in bloom. Blowing plants ought to be kept in the shade, in a north aspect, and in pans of water.

FURTHER INSTRUCTIONS ON THE CULTURE OF THE HYACINTH.

Double hyacinths, which are much more beautiful and estimable than those which produce single flowers, are, like the latter, known by the general distinction of reds, whites, and blues, with a few kinds of yellow recently obtained from seed. In many instances double hyacinths have the peculiar advantage of a beautiful contrast of colour in the eye, or centre of their bells, which the single sorts cannot possess.

The bulbs of hyacinths may be planted at any time from the middle of October to the middle of November; if it be done earlier the plants will appear above ground in the middle of winter, which will render them liable to material injury from severe frosts; or if it be deferred later, the sorts will be weakened by their natural tendency to vegetate, manifested by the swelling of the circle whence the fibres proceed, which will be soon followed by an actual appearance of the points of the fibres, together with that of the foliage at the other extremity of the bulb, in the form of a small obtuse cone of a greenish colour.

The bed on which they are to be planted should be situated in rather a dry and airy part of the garden, a southern aspect is to be preferred, shaded on the north and east side by trees or buildings, at a distance from it proportionable to their height: if it be a common garden wall, or hedge, the distance of six feet will be sufficient; care, however, must be taken to avoid the drip of trees, which is found to be prejudicial.

When the situation is determined on, the dimensions of the bed should be marked out, and the soil entirely taken away to the depth of at least two feet: the earth in the bottom must then be dug up and comminuted, or pulverised, a spade or nine inches deeper, and the space above filled up with a compost, consisting of the following ingredients, in the annexed proportions, viz:—

One third, coarse sea or river sand.

One third, fresh sound earth.

One fourth, rotten cowdung, at least two years old.

Earth of decayed leaves for the remainder.

The fresh sound earth of the compost should be of the best quality that the garden or the adjacent country produces. It should be entirely free from noxious vermin of any description, particularly the hard yellow wireworm, which is about an inch long, and prevails in most parts of the kingdom. Some make use of rotten tan as an ingredient in the compost, but it generally retains some degree of astringency which is pernicious to delicate flowers.

The ingredients before mentioned are to be well mixed and incorporated: and about a fortnight previous to planting, the bed should be filled up with the compost to about four inches above the level of the path on the south or front side, and ten inches on the north side, so as to form a regular slope or inclination towards the sun.

M. St. Simon in his elaborate work, "Des Jacintes," on the Dutch mode of cultivating the hyacinth, informs us, that the compost used at Haarlem is rotten cowdung, rotten leaves, and fine sand. The leaves of elm, lime, and birch, are preferred to those of oak, walnut, beech, plane, &c., which do not rot so quickly. The cowdung is the droppings only from cattle fed in stalls on dry food. The sand is procured in the neighbourhood of Haarlem, from a stratum of that mate rial, deposited in one of hard undecayed timber, the remains of an ancient forest, which had been overwhelmed by the sea. The leaves are rotted by themselves, and when fit for use placed in triternate layers of sand, leaves, and cowdung. The heap is commonly a ridge or cone, of six or seven feet in height; it lies untouched for six months, and is then turned out, in which state it remains some weeks, and is then carried to the flower beds. This compost retains its qualities six or seven years; the inferior kinds of hyacinths or narcissuses are planted in the first year; the second year tho finer sorts are planted, and the remaining years a rotation is adopted in which hyacinths alternate with tulips, jonquils, crocuses, &c.

On planting the roots, the surface of the bed should be covered with a little fresh sandy earth, about one inch thick, raked perfectly smooth and even, and have the exact situations of every bulb marked upon it.

CULTURE OF HORSERADISH.

Horseradish is a vegetable which in certain soils is of extremely difficult culture, whilst in others it is of a growth uncontrollably luxuriant. It is a most pernicious weed when it intrudes, because of the multitude of vital germs, by which its root stock abounds, and by which it is rendered a sort of vegetative polypus, every inch of it being capable of developing a growing bud.

Such being the difficulty of artificial propagation, it may be questioned whether much trouble is not expended uselessly in order to effect that which nature produces by the most simple means. However, horseradish may be procured by trenching two feet deep, a plot of fine loam, removing all stones as the work proceeds. One trench being well cleared, a layer of manure two inches thick should be laid at the bottom (for none must be mixed with the soil,) and upon that three inches of fine loam. Some fine straight roots being in readiness, they are to be cut into two thick lengths, and pieco after picco pressed into the soil eight inches asunder, in a row to the whole length of the trench, and exactly in the middle. The soil is then to be dug out another two feet square, turning it into tho open trench, clearing away the stones and other rough substances. Thus, alternately trenching and ploughing, a bed will be formed to any extent that may be required. The work should be performed in October, or November, or in March and April, and the driest weather of the season should be selected.

Abercrombie, one of the best practical writers on gardening, made the following judicious remarks which will, if duly considered, throw light upon those habits of the plant which have led to the deep method of culture thus described:—"The root (he says) being durable, forms itself into a thick, knotty stool, at a certain depth, sending up several erect straight root shoots, in length proportionate to the depth of the stool or main root, which, if planted fifteen or sixteen inches below the surface, the shoots or sticks of horseradish will rise to that length. They will rise in May, increasing all summer, till October; when in rich ground, they will be sometimes large enough to dig up for use, being an inch thick: if not, they must have another year's growth, by taking them up clean to the bottom, by cutting them off close to the old stool, which remaining, sends up a fresh supply annually.'

These habits indicate two important facts: first, that the crown or stool must enjoy all the benefit of the manure, to enable it to send up a straight stem, and to nourish that stem by its own power; consequently, no manure must be placed on the upper soil, where it might excite lateral growth: secondly, it points out the method of taking up the roots, which should always be that of trenching, beginning at one end of the bed, and clearing away the soil to the full depth of the original trench. Thus a row can be taken without disturbing the crowns, by cutting off tho sticks or upright shoots, close to the head of each stool or stalk, and what is surplus of each digging can be preserved in sand till more be required.

THE CULTURE OF STOCK JULY-FLOWERS AND WALL-FLOWERS.

The method to procure fine double stock July-flowers, Brompton and Queen stocks, is to make choice of such single flowering plants as grow near many double ones, for it has been observed that seed saved from plants growing amongst double kinds has produced a much greater number of double flowering plants than those which have been saved from plants separated from the double ones; sow the seed in May, and after they have reached two or three inches high, they should bo thinned, at least, nine inches asunder, and the plants so taken out may be planted at about six inches apart in the flower border. If the following winter should be severe, the plants should be sheltered by mats, and in the following May or June they will become the greatest ornament to the flower border.

Fine double varieties may be propagated by cuttings which take root readily, if planted under a hand-glass and shaded. The annual or ten-week stock should be sown at three or four different times, February, March, April, and May; the plants from the last sowing will continue to flower till Christmas. Care should be taken in preserving only such single flowering plants for seed, both of the stock July-flower and ten-week stock, as have flowers of a fine colour. All the biennial and hardy shrub species of Mathiola should be tretated in the same manner as that recommended for the stock July-flowers, and all annual species as that recommended for ten-week stocks. Fine double stocks may be planted in pots, in order that they may be sheltered by a frame during winter. *Mathiola fenestralis* thrives best if sown in rock-work. The greenhouse shrubby kinds thrive best in a light soil, mixed with sand, and cuttings will strike readily if planted under a bell-glass.

The hardy shrubby species, such as fine varieties of the common wall-flower, should be increased by young cuttings, which will soon strike if planted under a hand-glass. The greenhouse or frame kinds will thrive in a very light soil, and young cuttings planted in the same kind of soil will strike most freely under a hand-glass. The perennial or herbaceous species may be increased, by dividing the plants at the root, by young cuttings planted under a hand-glass, or by seeds. The biennial and annual species only require to be sown in the open border; some of the tenderer sorts, or those natives of warmer climates, may be sown in a gentle hotbed in the month of March, and transplanted in the open borders about the middle or end of April. The whole of the species answer well to be planted or sown on rock-work, and even the tenderer species will survive the winter in such a situation.

THE END.

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SOME TIGHT

GUTTERS

VERY TIGHT

BINDING

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